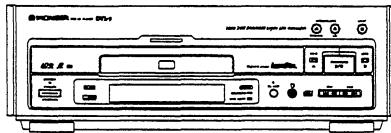


Service Manual



ORDER NO.
RRV1783

DVD LD PLAYER **DVL-9**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power requirement	Remarks
RL	○	AC110 - 120V / 220 - 240V	

- For the DVD section, refer to the service guide RRV1710 for DV-500.

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1. SAFETY INFORMATION

VARO!
AVATTAESSA JA SUOJALUKITUS
OHITETTAESSA OLET ALTIINA
NÄKYMÄTTÖMÄLLE LASERSÄTEIYLLE.
ÄLÄ KATSO SÄTEESEEN.



LASER
kuva 1
Lasersateilyn
varoitusmerkki

ADVARSEL:
USYNLIG LASERSTRÅLING VED ÅBNING
NÅR SIKKERHED SAFBRYDERE ER UDE AF
FUNKTION. UNDGÅ UDSÆTTELSE FOR
STRÅLING.



LASER
Picture 1
Warning sign for
laser radiation

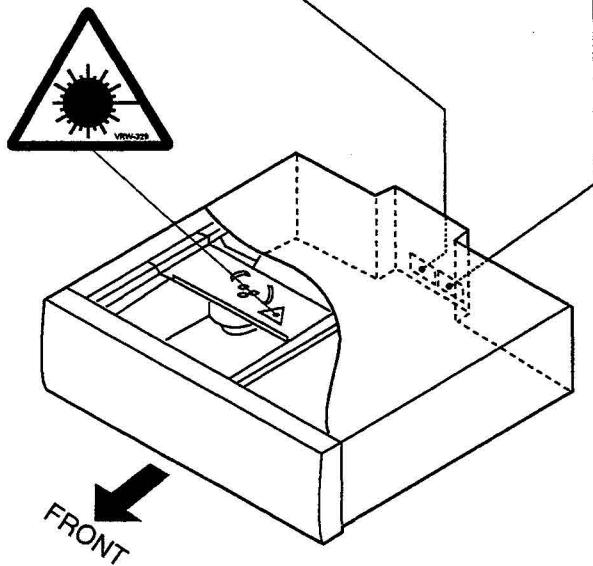
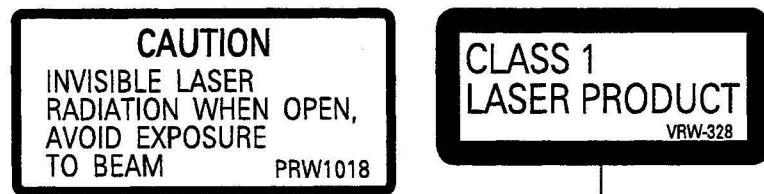
WARNING!
OSYNLIG LASERSTRÅLNING NÄR DENNA
DEL ÄR ÖPPNAD OCH SPÄRREN
ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

WARNING!
DEVICE INCLUDES LASER DIODE WHICH
EMITS INVISIBLE INFRARED RADIATION
WHICH IS DANGEROUS TO EYES. THERE IS
A WARNING SIGN ACCORDING TO PICTURE
1 INSIDE THE DEVICE CLOSE TO THE LASER
DIODE.

IMPORTANT
THIS PIONNER APPARATUS CONTAINS
LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS
SHOULD BE DONE BY A SPECIALLY
INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER : 5 mw
WAVELENGTH : 780-785 nm

LABEL CHECK



Additional Laser Caution

1. The ON/OFF statuses of the side-A/B detection switch (Lever switch connecting to the TNMB assy), slider-position detection switches (INNER and OUTER on the PKSB assy), loading-status detection switches (SW1, 2 and 3 on the LMSB assy), side B inside detection switch (S901 on the BISB assy) and CLD pickup active detection switch (S903 on the LCSB assy) are detected by the microprocessor (IC101 in the CLD MAIN assy). Also the DVD pickup active detection switch (S902 on the DCSB assy) is detected by the microprocessor (IC201 in the DVD MAIN assy).
 - To permit the laser diode of CLD pickup to oscillate, it is required to set the CLD pickup active detection switch (S903 : OFF) and the slider-position detection switches for the LD ACTIVE status (INNER : OFF, OUTER: OFF), and to set the loading-status detection switches for tilt neutral state (SW1 : ON, SW2 : OFF, SW3 : ON). As long as these requirements are not satisfied, the laser diode will not oscillate. When the requirements are met in any way, the laser diode can oscillate. The laser diode oscillation will continue if pin 13 of IC801 is shorted to GND or the emitter and collector of Q834 are shorted each other (fault condition) in the CLD MAIN assy.
 - To permit the laser diode of DVD pickup to oscillate, it is required to set the DVD pickup active detection switch (S902 : OFF) and each switch and a state of laser diode are contents same as state of CLD pickup mentioned above. The laser diode oscillation will continue if pin 5 of IC995 is shorted to +5V (fault condition) in the DVD MAIN assy.

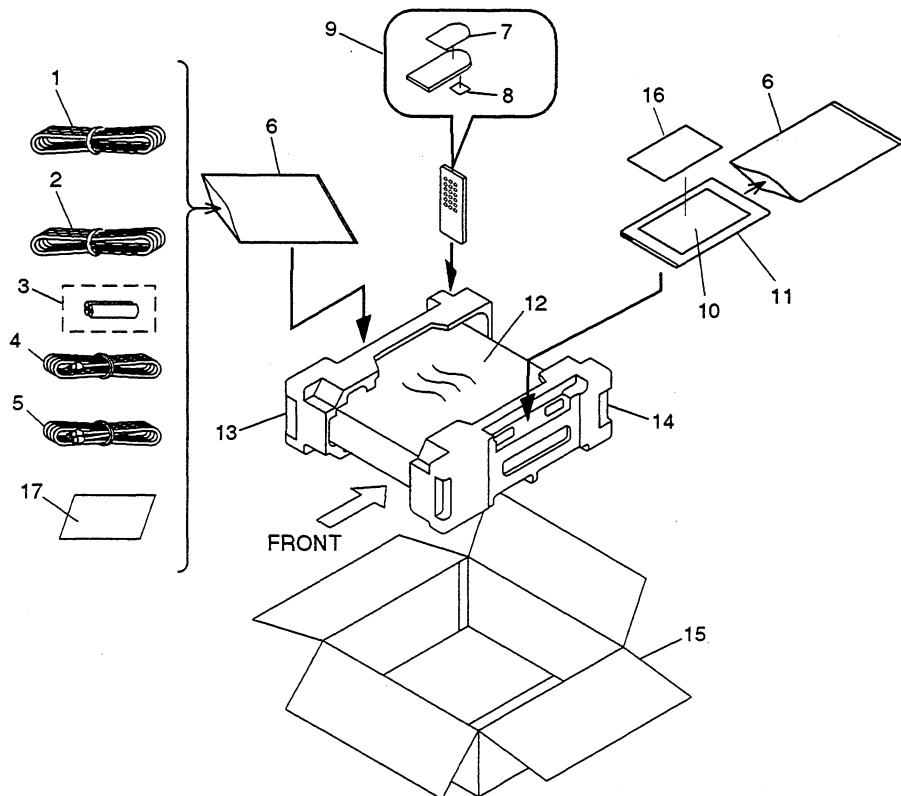
In the test mode *, the laser diode oscillates when the microprocessor detects a PLAY signal, or when the PLAY key is pressed (S204 ON in the KEYB assy), with the above requirements satisfied.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 79.

2. EXPLODED VIEWS AND PARTS LIST

NOTES : • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 • The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 • Screws adjacent to  mark on the product are used for disassembly.

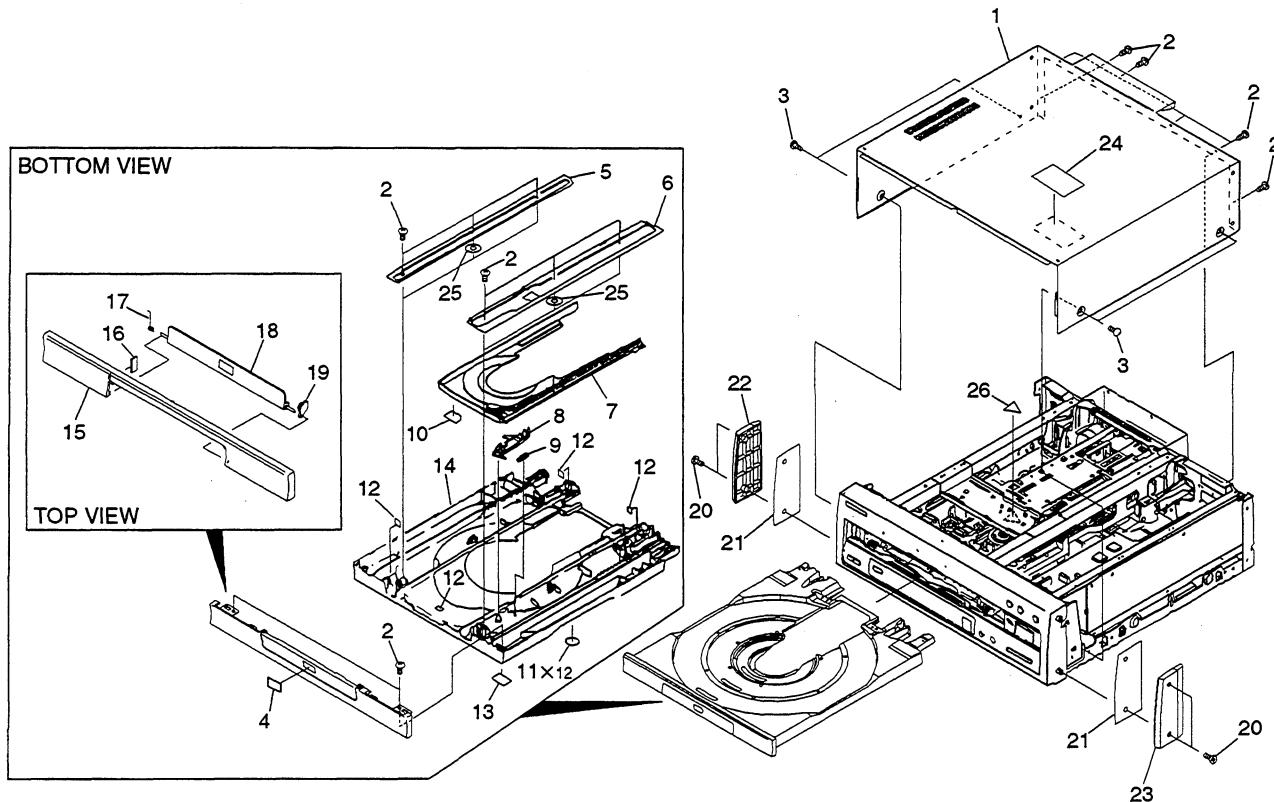
2.1 PACKING



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Power Cord (Round Blade 2-Pin AC Plug)	ADG1154		9	Remote Control Unit (CU-DV002)	VXX2428
	2	Power Cord (Flat Blade 2-Pin AC Plug)	ADG1158	NSP	10	Warranty Card	ARW1020
NSP	3	Dry Cell Battery (R03,AAA)	VEM-022		11	Operating Instructions (English/Chinese)	VRD1065
	4	Video Cord	VDE1036		12	Mirror Mat	VHL1018
	5	Audio Cord	VDE1033		13	Pad L	VHA1195
	6	Polyethylene Bag	Z21-038		14	Pad R	VHA1196
	7	Upper Cover	VNK3941	NSP	15	Packing Case	VHG1640
	8	Battery Cover	VNK3920		16	Caution	VRM1067
				NSP	17	Caution	VRM1068

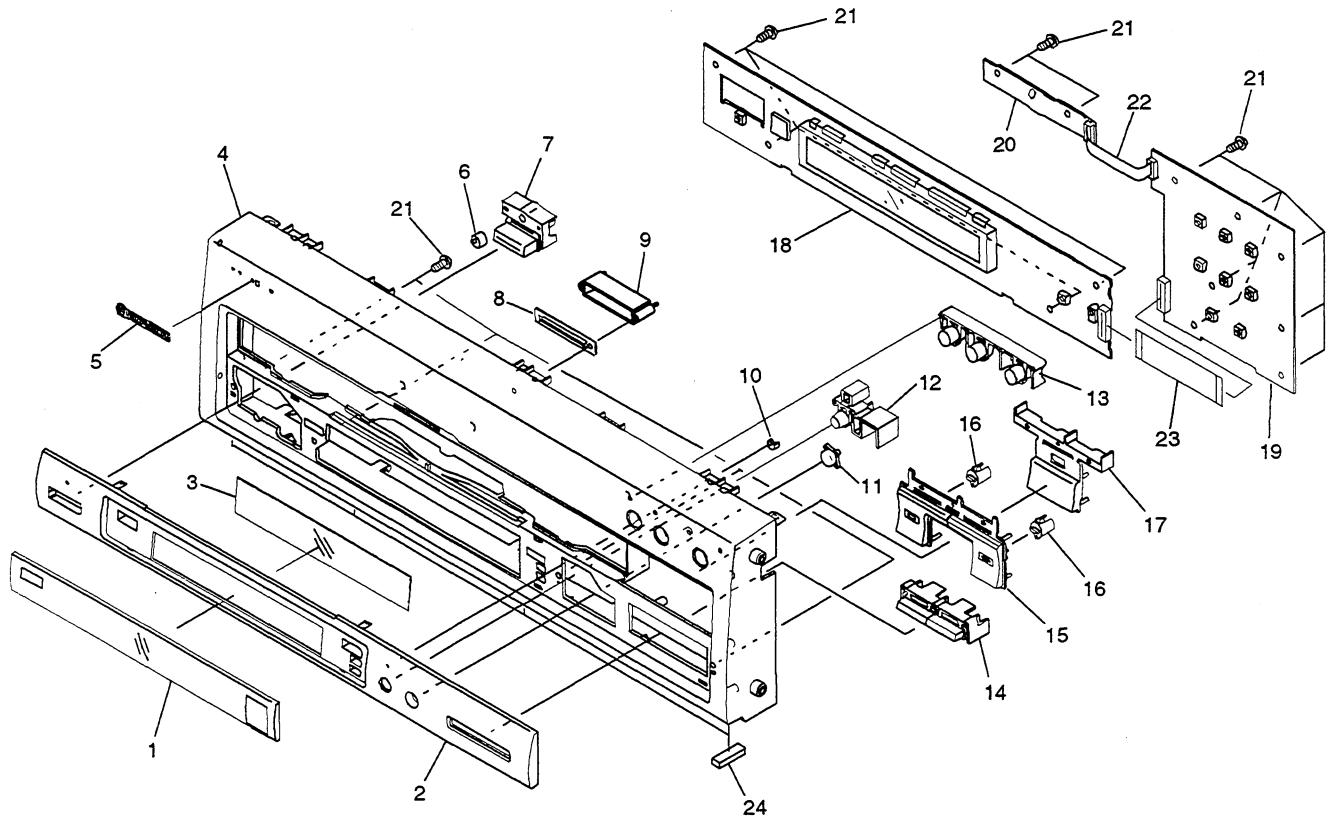
2.2 EXTERIOR SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
1	Bonnet Case S	VXX2483		14	LD Tray Assy	VXA2302	
2	Screw	BBZ30P080FMC		15	Tray Panel	VNK3606	
3	Screw	BCZ40P060FZK		16	Door Holder	VEC1904	
4	DVD Plate	VAM1066		17	Door Spring	VBH1248	
5	Guide Plate (R)	VNE1939		18	DVD Door Assy	VXA2273	
6	Guide Plate (L)	VNE1938		19	Damper Assy	VXA1999	
7	CD Tray	VNK3664		20	Screw	VBA1028	
8	Lock Plate	VNL1703		21	Side Spacer	VNK3860	
9	Lock Plate Spring	VBH1188		22	Side Panel L	VNK3679	
10	Tray Label	VRW1628		23	Side Panel R	VNK3680	
11	Cushion	VEC1881		24	Label (REGIONAL)	VRW1654	
12	Damp Cushion	VEC1683		25	Washer	VEC1254	
NSP	13	Carry Label	VRW1289	26	Caution Label (G)	VRW-329	

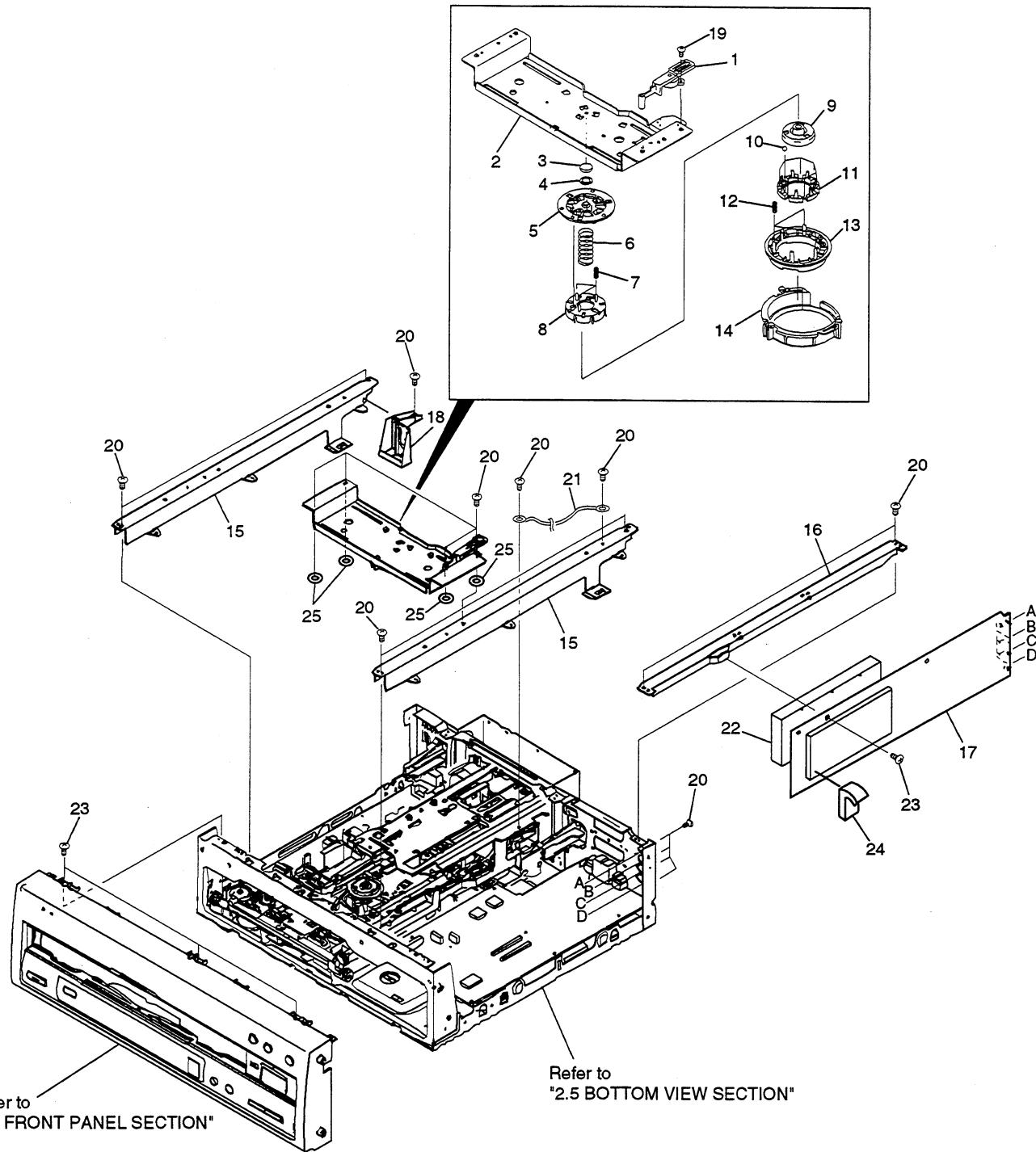
2.3 FRONT PANEL SECTION



Parts List

Mark	No. Description	Part No.	Mark	No. Description	Part No.
1	FL Lens	VNK3599	13	Open Button	VNK3599
2	Sub Panel	VNK3663	14	Skip Button	VNK3603
3	FL Filter	VEC1891	15	Side Button	VNK3660
4	Front Panel	VNK4027	16	Side Lens	VNK3602
5	Name Plate	VAM1051	17	Play Button	VNK3600
6	LED Lens	PNW2019	18	FLPB Assy	VWG1841
7	Power Button	VNK3607	19	KEYB Assy	VWG1842
8	Illumination Lens	VNK3652	20	LEDB Assy	VWG1832
9	LED Holder	VNK4001	21	Screw	BBZ30P080FMC
10	LED Lens 1	RNK2066	22	Flexible Cable (5P)	VDA1590
11	IR Window	VNK2246	23	Flexible Cable (19P)	VDA1603
12	Display Button	VNK3667	NSP	Spacer A	VEC1933

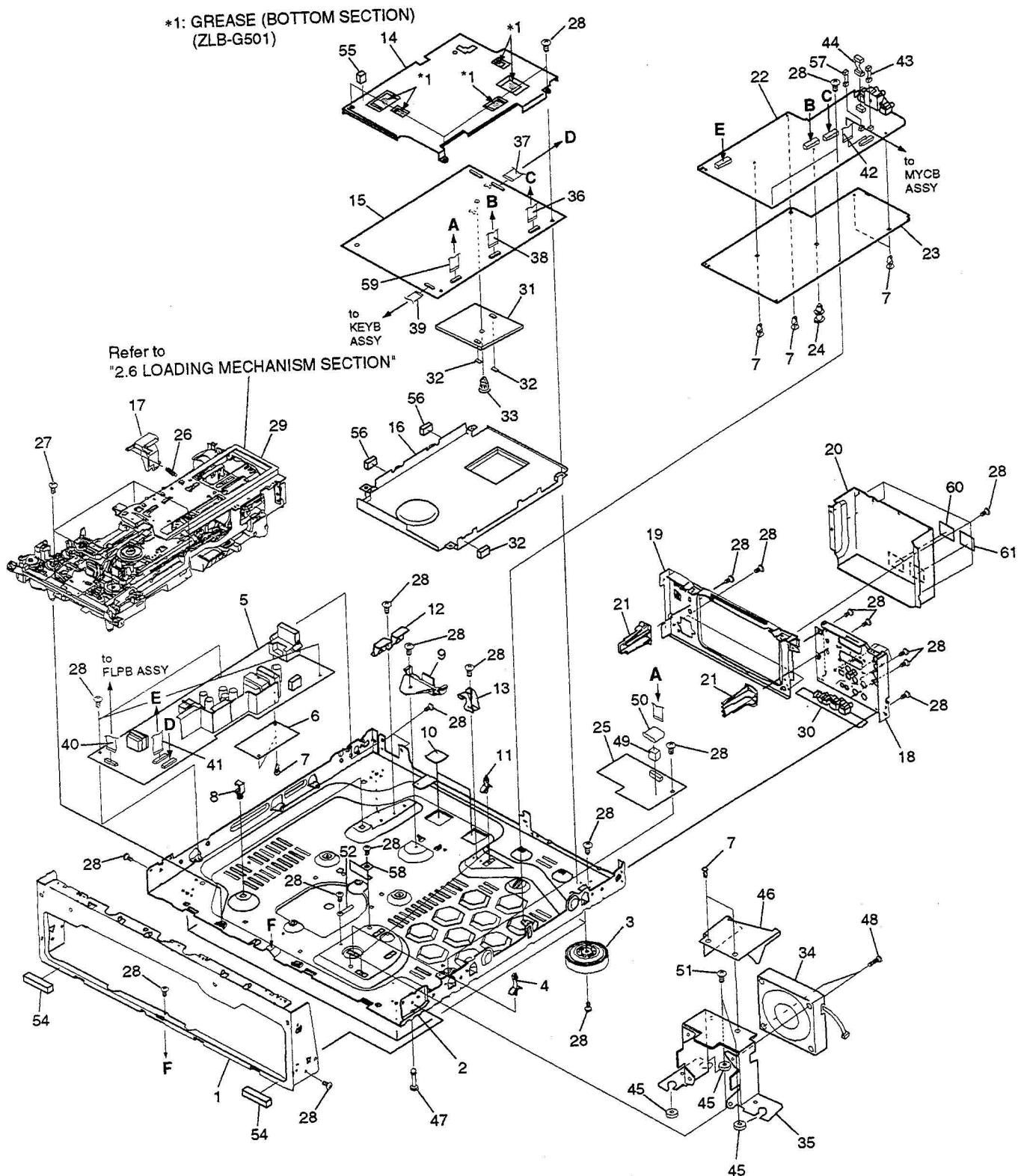
2.4 TOP VIEW SECTION



Parts List

Mark	No. Description	Part No.	Mark	No. Description	Part No.
1	D Lever Assy	VXA2205	13	Clamper	VNL1604
2	Center Plate	VNE2051	14	Clamper Holder	VNL1708
3	Rubber Sheet	VEB1114	NSP	15 Center Angle	VNE2048
4	Thrust Holder	VNL1663	NSP	16 PCB Holder	VNE2049
5	Clamper Head	VNL1603	17	MGYCB Assy	VWV1468
6	LD Spring	VBH1240	18	Shipping Cam	VNL1729
7	Cover Spring	VBH1234	19	Screw	PBZ20P060FMC
8	Ball Cover	VNL1602	20	Screw	BBZ30P080FMC
9	LD Hab	VNT1047	NSP	21 Wire	DE007VF0
10	Steel Ball	VNX1013	22	Shield Case B	VNF1099
11	Ball Guide	VNL1616	23	Screw	IBZ30P080FMC
12	Clamp Spring	VBH1239	24	Cushion	VEC1925
			25	Washer	VEC1952

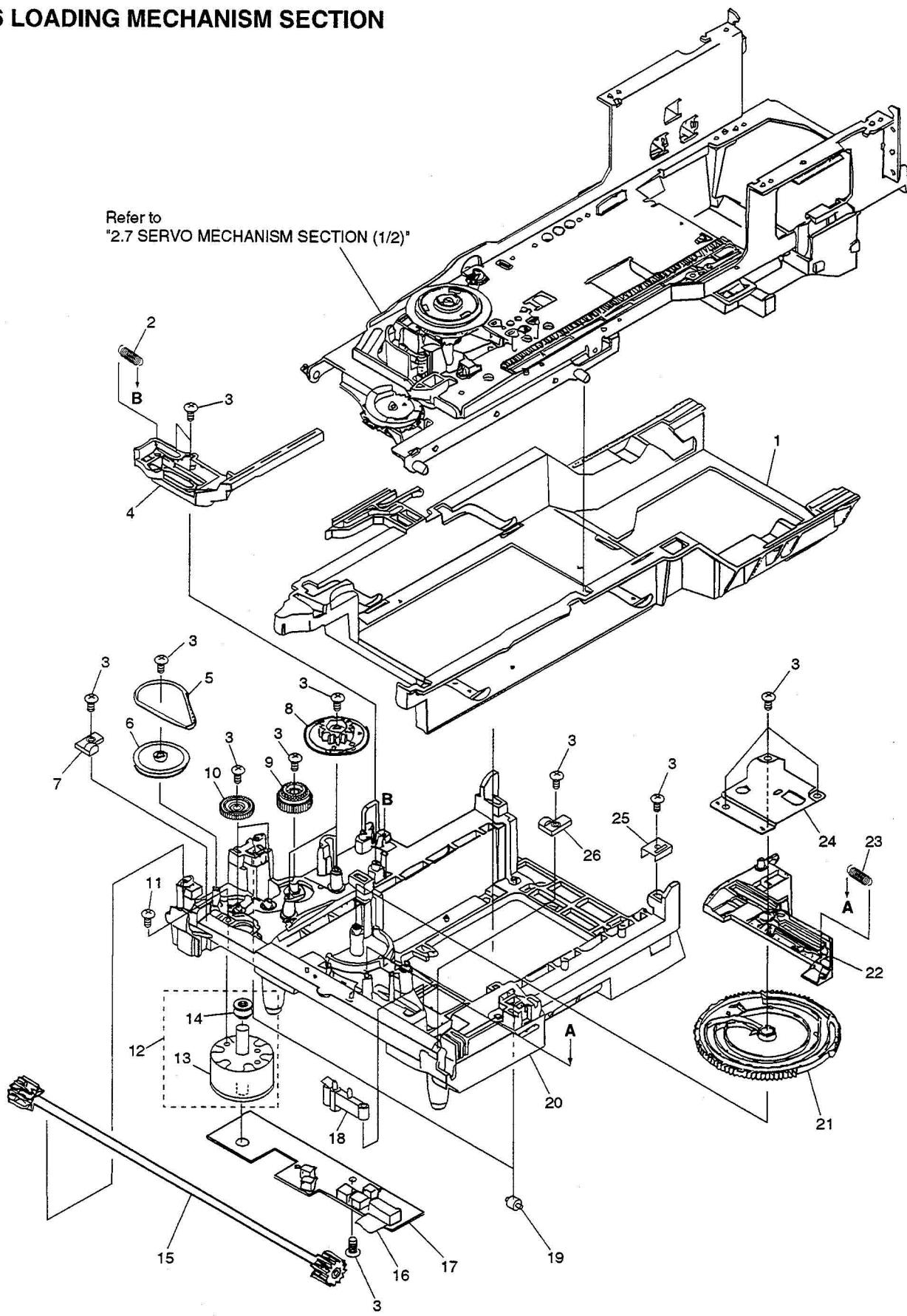
2.5 BOTTOM VIEW SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	Panel Holder	VNA1686		31	FTSB Assy	VWS1291
NSP	2	Chassis	VNA1851		32	Spacer A	VEC1933
	3	Insulator	PNW1912		33	PCB Holder	AEC1534
NSP	4	Spacer 40	PNW2488		34	DC Fan Motor	VXM1070
△	5	POWER SUPPLY Assy	VWR1274		35	Fan Holder	VNE2108
	6	Sheet P	VEC1874		36	Flexible Cable (26P)	VDA1587
	7	Rivet	RBM-003		37	Flexible Cable (24P)	VDA1588
	8	PCB Hinge	VEC1174		38	Flexible Cable (30P)	VDA1586
NSP	9	Stopper	VNE2088		39	Flexible Cable (13P)	VDA1589
	10	Rubber Spacer	VEC1939		40	Flexible Cable (5P)	VDA1572
NSP	11	PCB Spacer	AEC1188		41	Flexible Cable (15P)	VDA1582
NSP	12	Cam Holder L	VNE2089		42	Flexible Cable (10P)	VDA1583
NSP	13	Cam Holder R	VNE2090		43	Housing Assy (2P)	VKP2138
	14	Shield Case (Upper)	VNF1093		44	Housing Assy (8P)	VKP2139
	15	DVD MAIN Assy	VWS1312		45	Rubber Bush	VEB1164
	16	Shield Case (Lower)	VNF1110	NSP	46	Fan Cover	VEC1921
	17	Shipping Lever	VNL1728	NSP	47	Locking Card Spacer	VEC1596
	18	Rear Panel L	VNA1807		48	Screw	IBZ30P150FMC
	19	Rear Panel R	VNA1684	NSP	49	Spacer B	VEC1934
	20	Rear Cover	VNA1812	△	50	Ferrite Core	VTH1038
	21	Tray Stopper	VNL1707	NSP	51	Screw	VBA1029
	22	CLD MAIN Assy	VWS1284		52	Cord Holder	ZCB-069Z
	23	Sheet C	VEC1875	NSP	53	• • • •	
NSP	24	PCB Spacer	AEC1372	NSP	54	Cushion	VEC1923
	25	MCRB Assy	VWV1544	NSP	55	Spacer C	VEC1935
	26	Shipping Spring	VBH1275		56	Cushion	VEC1924
	27	Screw	BBZ30P100FMC	NSP	57	Housing Assy (2P)	VKP2142
	28	Screw	BBZ30P080FMC		58	PCB Angle	VNE2110
NSP	29	Mechanism Assy	VWT1132		59	Flexible Cable (26P)	VDA1621
	30	JCKB Assy	VWV1532		60	Caution Label	PRW1018
				NSP	61	Caution Label (F)	VRW-328

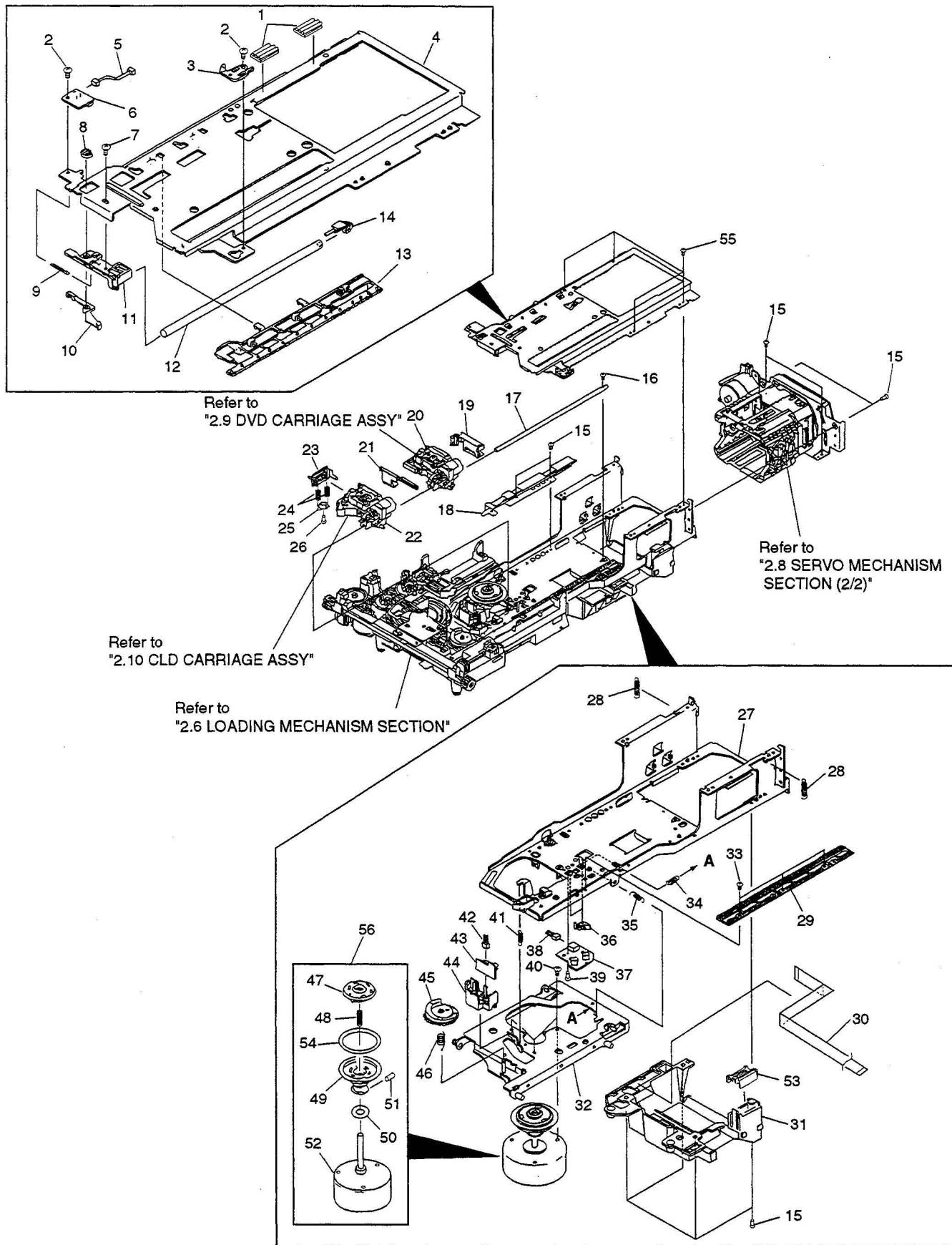
2.6 LOADING MECHANISM SECTION



Parts List

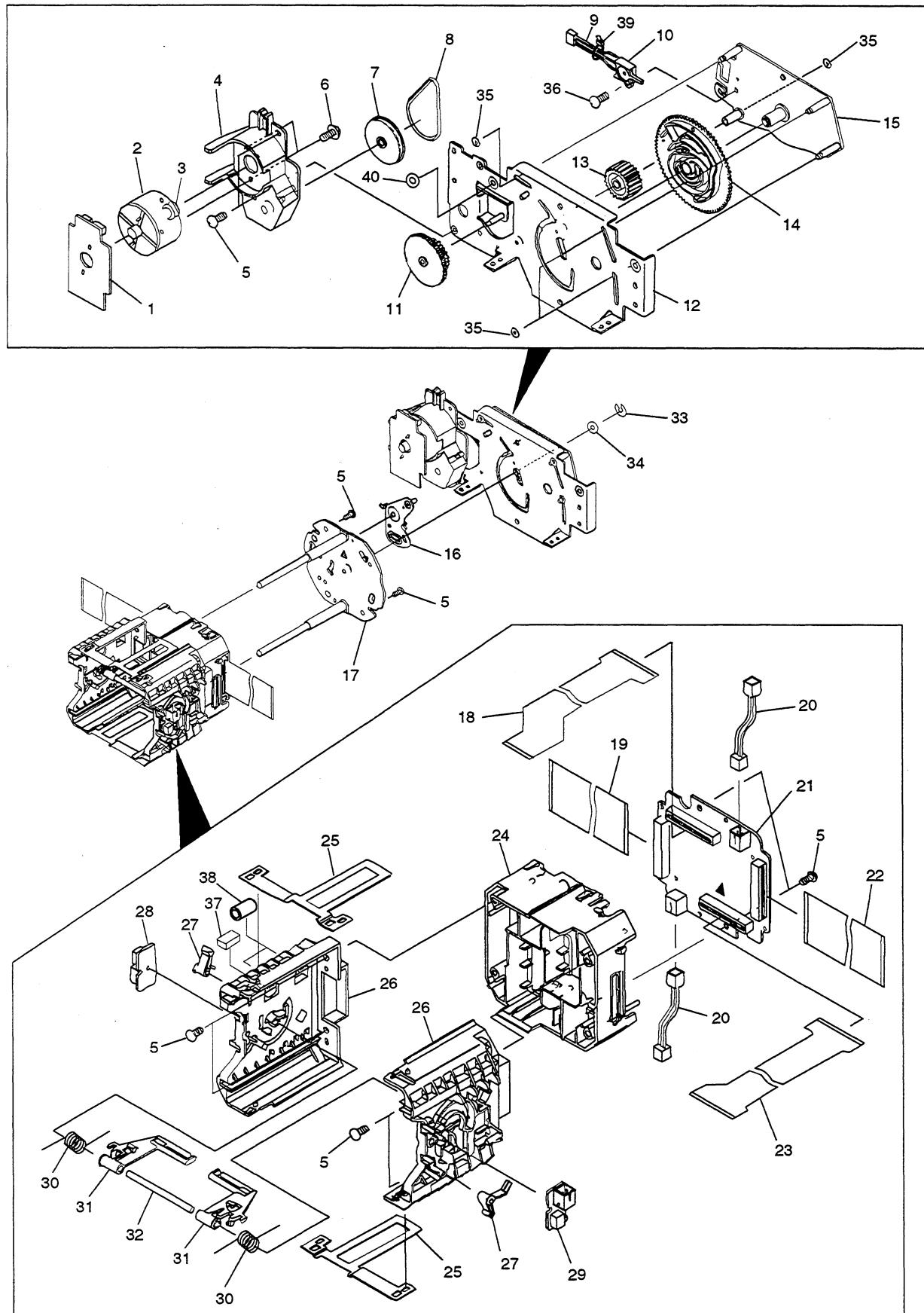
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Clamp Cam B	VNL1765		16	Flexible Cable (10P)	VDA1579
	2	CDP Spring	VBH1191	NSP	17	LMSB Assy	VWG1554
	3	Screw	Z39-019		18	MB Switch Lever	VNL1664
	4	CD Plate	VNL1685		19	Roller	VNL1042
	5	Rubber Belt	VEB1184		20	Mechanism Base	VNK3239
	6	Gear Pulley	VNL1662		21	Cam Gear	VNL1625
	7	Slider (L)	VNL1665		22	Cam Plate	VNL1631
	8	Twin Gear	VNL1626		23	CAS Spring	VBH1190
	9	Center Gear	VNL1660		24	Shaft Holder	VNE1942
	10	Double Gear	VNL1661		25	CAM Holder	VNE2032
	11	Screw	BMZ26P040FMC		26	Slider (R)	VNL1666
	12	Loading Motor Assy	VXX2045				
	13	Carriage Motor	VXM1033				
NSP	14	Motor Pulley	VNL1630				
	15	Synchro Gear Assy	VXA2105				

2.7 SERVO MECHANISM SECTION (1/2)



Parts List

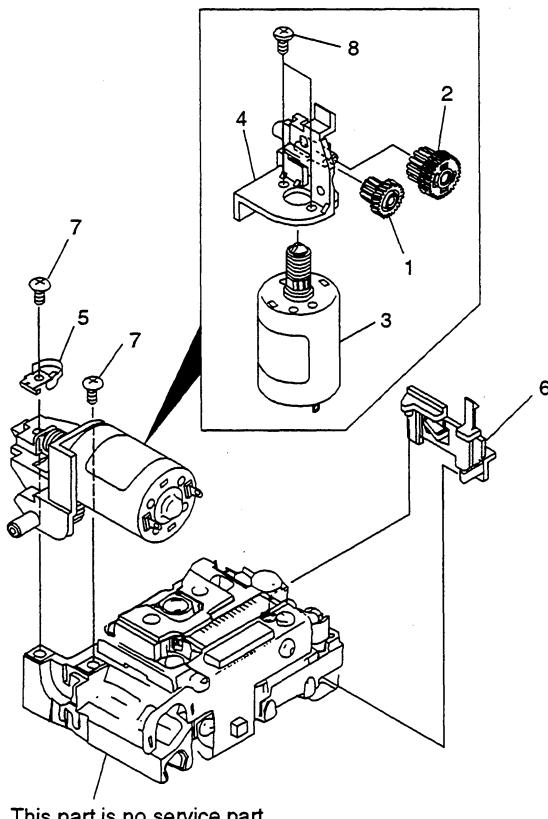
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Mini Clamp	VEC1905		26	Screw	PMZ20P060FZK
	2	Screw	BBZ26P060FMC		27	Tilt Base (Under)	VNL1711
	3	A Horn	VNL1689		28	Tilt Rear Spring	VBH1274
	4	Tilt Base (Upper)	VNE2062		29	CA Rack (Lower)	VNL1712
	5	Housing Assy (2P)	VKP2136		30	Flexible Cable (6P)	VDA1578
NSP	6	BISB Assy	VWG1796		31	Flexible Cable Cover	VNL1727
	7	Screw	BPZ20P040FZK		32	Motor Base	VNE1941
	8	B Cam	VNL1725		33	Screw	IBZ26P060FMC
	9	Support Spring	VBH1273		34	Tilt Spring	VBH1263
	10	SW Lever B	VNL1723		35	Thrust Spring	VBH1245
	11	Shaft Holder	VNL1724	NSP	36	CA Switch Lever	VNL1644
	12	CA Shaft (Upper)	VLL1486		37	PKSB Assy	VWG1555
	13	CA Rack (Upper)	VNL1722		38	Housing Assy (3P)	VKP2045
	14	Shaft Stay	VNL1726		39	Screw	IBZ26P120FMC
	15	Screw	BBZ30P080FMC		40	Screw	PMA30P050FMC
	16	Screw	PPZ20P060FMC	NSP	41	Tilt Spring B	VBH1287
	17	CA Shaft (Lower)	VLL1485		42	Housing Assy (3P)	VKP2046
	18	TAN Guide	VNE2061		43	FG Assy	VWG1556
	19	FPC Holder A	VNL1751		44	FG Base	VNL1781
	20	DVD Carriage Assy	VWT1139		45	Tilt Cam	VNL1643
	21	FPC Holder B	VNL1752	NSP	46	Tilt Cam Spring	VBH1243
	22	CLD Carriage Assy	VWT1141		47	PRC Hub	VNL1684
	23	CA Guide	VNL1668		48	Centering Spring	VBH1269
	24	TAN Spring (B)	VBH1264	NSP	49	Turn Table Assy	VXA2285
	25	TAN Lever (B)	VNL1669	NSP	50	Oil Stopper	VBF1002
NSP				NSP	51	Screw	ZMD30H030FBT
					52	Spindle Motor	VXM1057
				NSP	53	Cover S	VNL1780
					54	Rubber Sheet	VEB1272
					55	Screw	BBZ30P050FZK
					56	Spindle Motor Assy	VXX2521

2.8 SERVO MECHANISM SECTION (2/2)

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	TNMB Assy	VWG1793	NSP	21	CNNB Assy	VWG1792
	2	Carriage Motor	VXM1033		22	Flexible Cable (27P)	VDA1581
NSP	3	Motor Pulley	VNL1630		23	PU FPC-A	VNP1582
	4	Motor Holder	VNL1717		24	PCB Holder	VNL1716
	5	Screw	BBZ30P080FMC		25	FC Guide	VNE2059
	6	Screw	BMZ26P040FMC		26	PU Holder	VNL1715
	7	Gear Pulley	VNL1662		27	SW Lever C	VNL1714
	8	Rubber Belt	VEB1184	NSP	28	LCSB Assy	VWG1795
	9	Housing Assy (3P)	VKP2137	NSP	29	DCSB Assy	VWG1794
	10	Lever Switch	DSK1003		30	FC Arm Spring	VBH1272
	11	Middle Gear	VNL1720		31	FC Arm	VNL1713
	12	Turn Panel Assy	VXA2337		32	Tilt Shaft	VLL1175
	13	Gear S	VNL1719		33	E Ring	YE30FUC
	14	Turn Cam Gear	VNL1718		34	Washer	WA42D080D050
	15	Swing Plate Assy	VXA2289		35	Washer	WT26D070D050
	16	Turn Lever Assy	VXA2292		36	Screw	PMA26P060FMC
	17	Turn Plate Assy	VXA2290		37	Cushion	VEC1917
	18	PU FPC-B	VNP1583		38	Tube	VEB1273
	19	Flexible Cable (26P)	VDA1580		39	Binder	Z09-056
	20	Connector Assy	PG02KK-E10		40	Washer	VEC1951

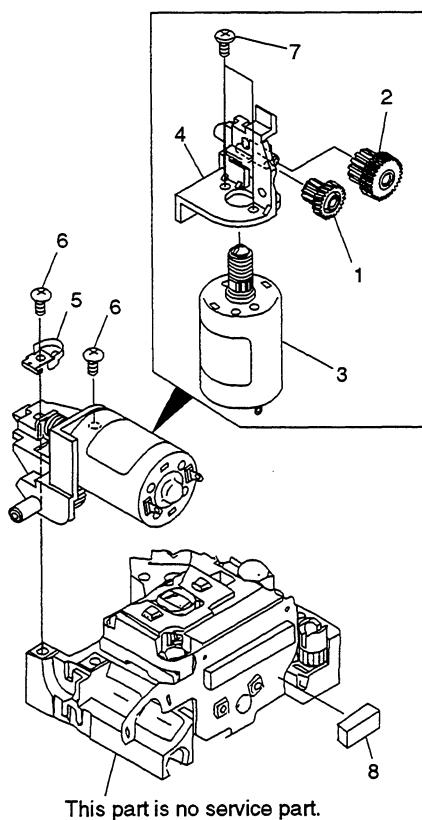
2.9 DVD CARRIAGE ASSY



Parts List

Mark	No. Description	Part No.
1	CA Gear (A)	VNL1782
2	CA Gear B Assy	VXX2471
3	Slider Motor Assy	VXX2472
4	Motor Holder	VNL1779
5	Thrust Holder	VBK1058
6	CA Guide B	VNL1721
7	Screw	BBZ20P050FZK
8	Screw	PMZ20P030FMC

2.10 CLD CARRIAGE ASSY

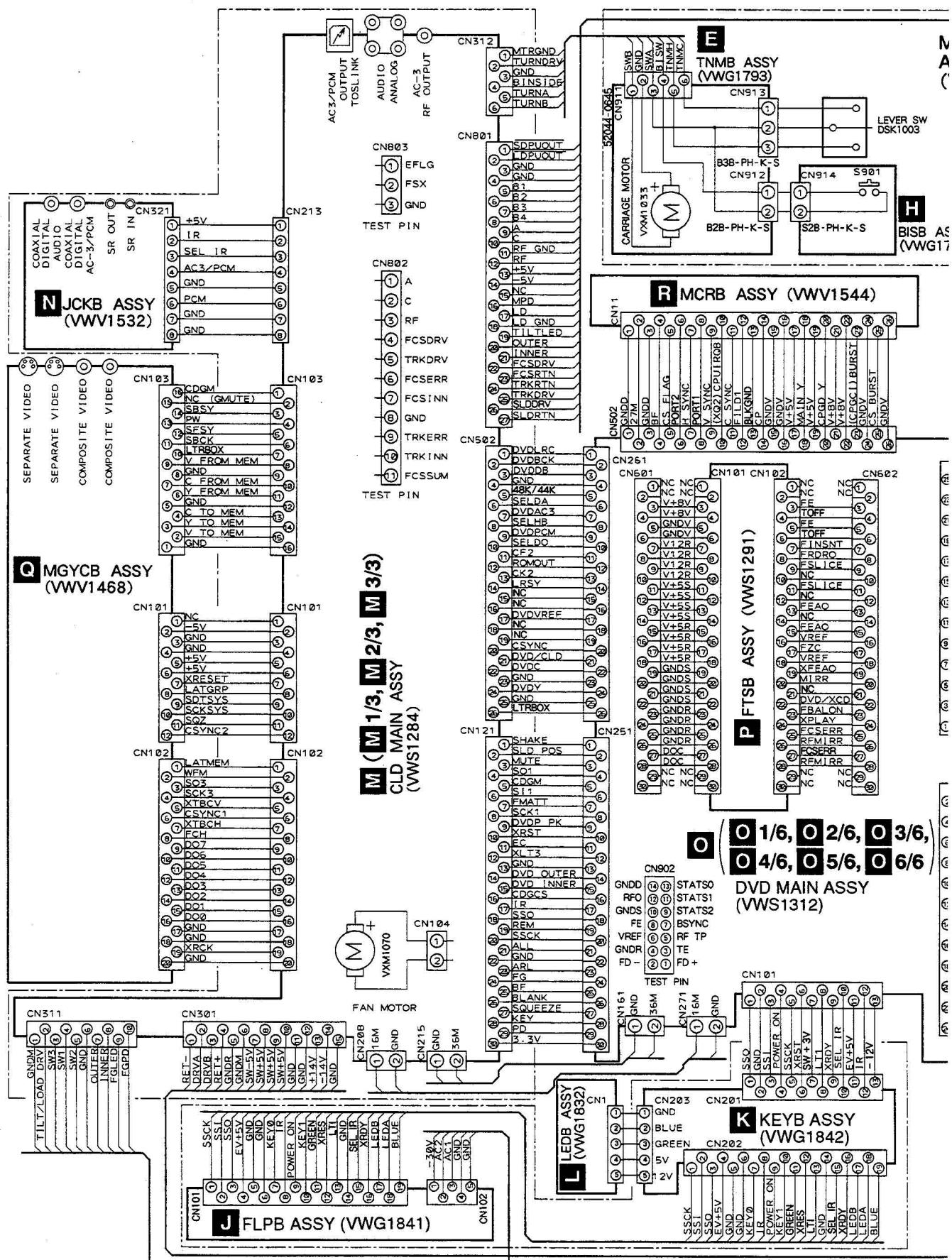


Parts List

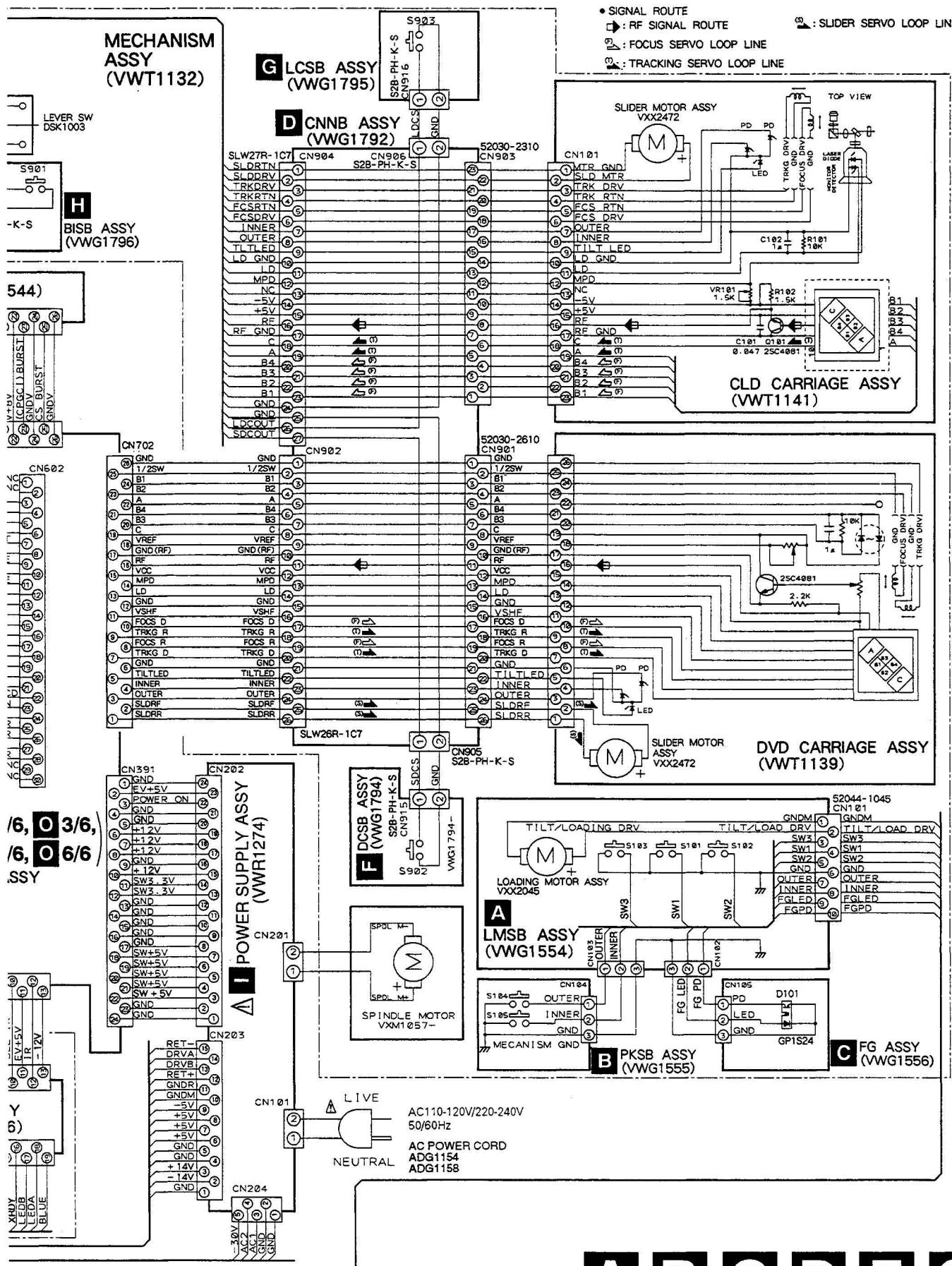
Mark	No. Description	Part No.
1	CA Gear (A)	VNL1782
2	CA Gear (B)	VNL1639
3	Slider Motor Assy	VXX2472
4	Motor Holder	VNL1779
5	Thrust Holder	VBK1058
6	Screw	PBZ20P050FMC
7	Screw	PMZ20P030FMC
8	Cushion B	VEC1945

3. SCHEMATIC DIAGRAM

3.1 OVERALL WIRING DIAGRAM, LMSB, PKSB, FG, CNNB, TNMB, DCSB, LCSB AND BISB ASSEMBLIES



**Note : When ordering service parts, be sure to refer to
"EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST"**



A B C D F G

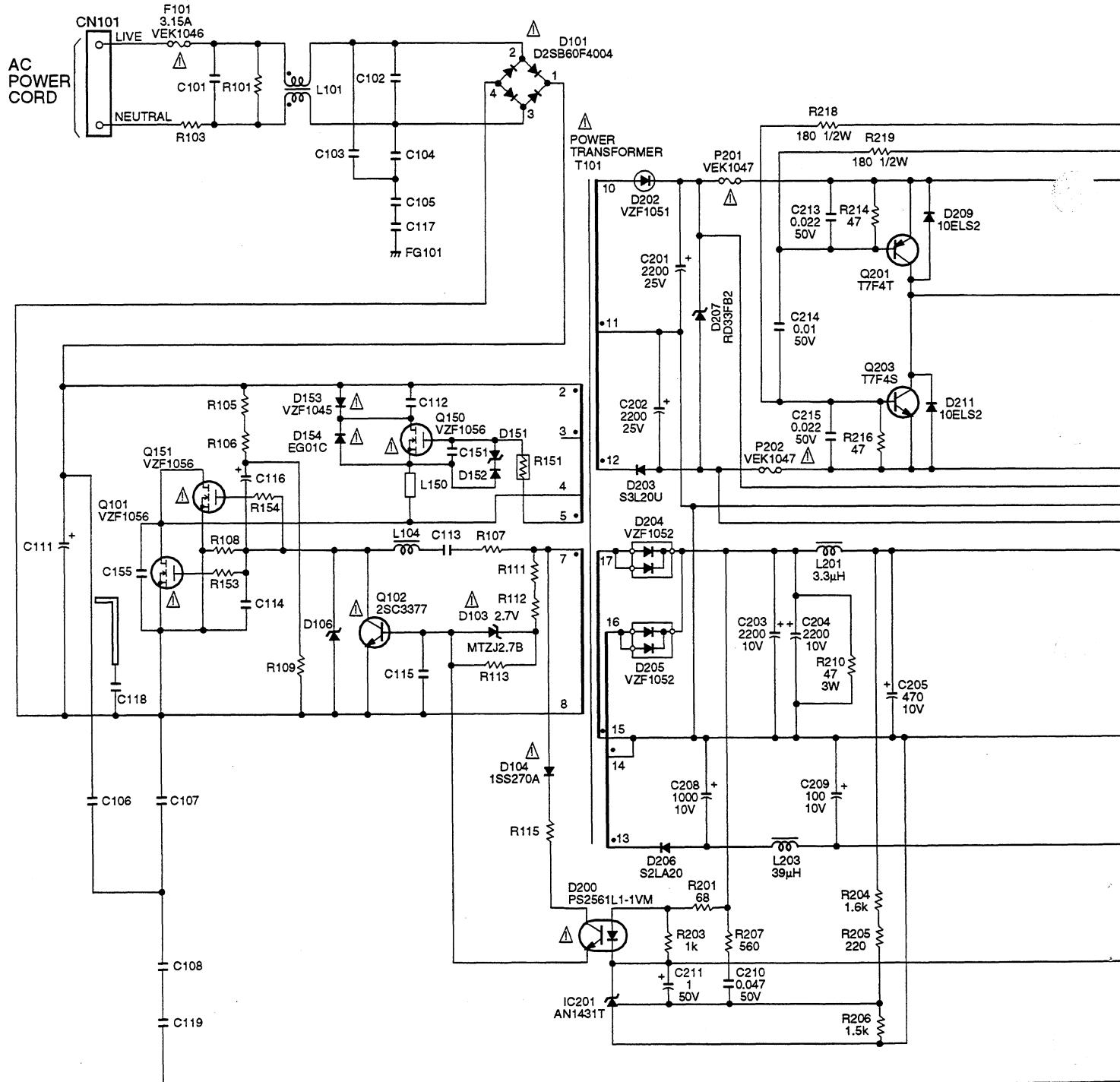
3.2 POWER SUPPLY ASSY

- NOTE FOR FUSE REPLACEMENT

**CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.**



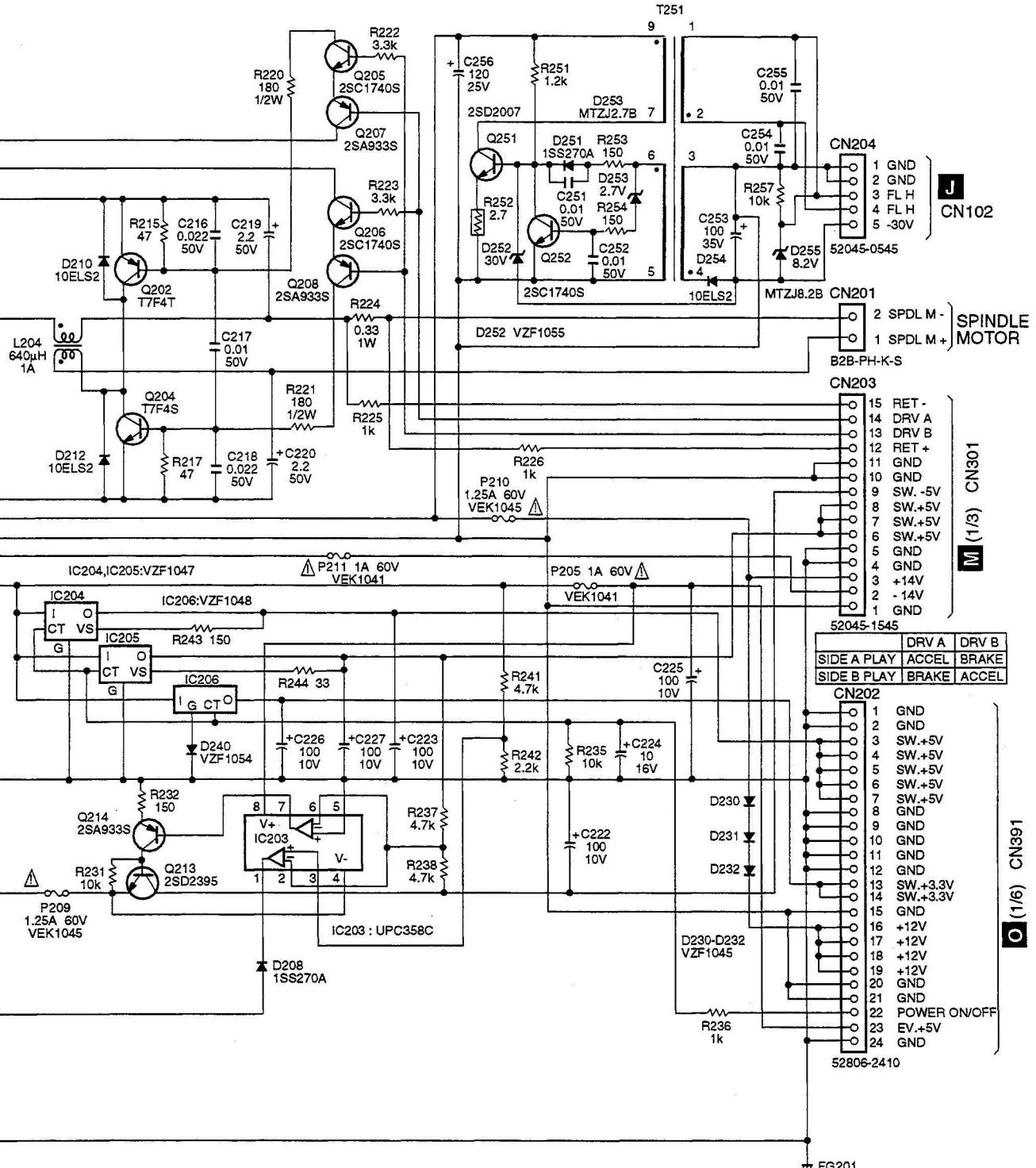
POWER SUPPLY ASSY (VWR1274)



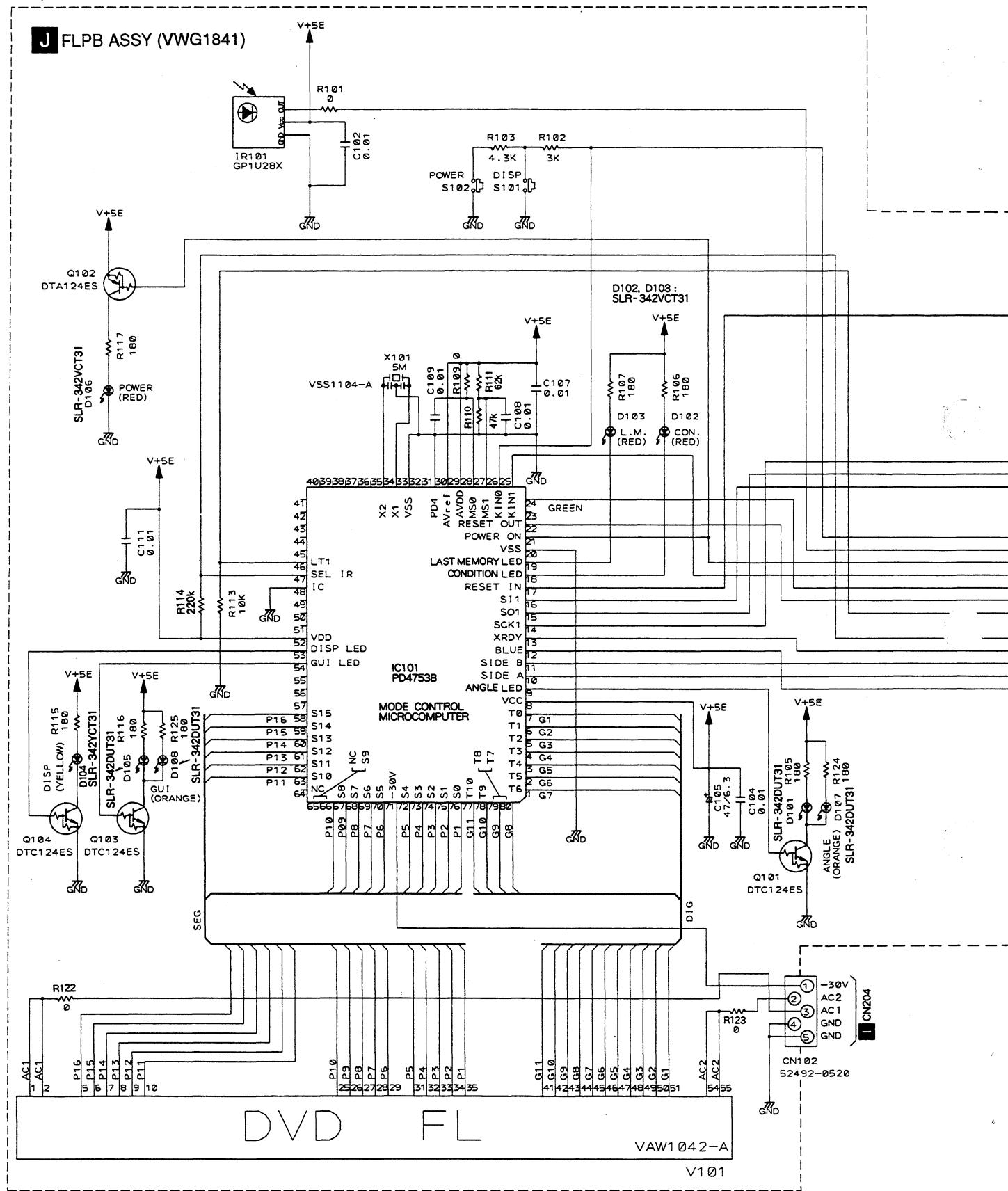
« NOTE OF SPARE PARTS IN POWER SUPPLY (SYPS) ASSY »

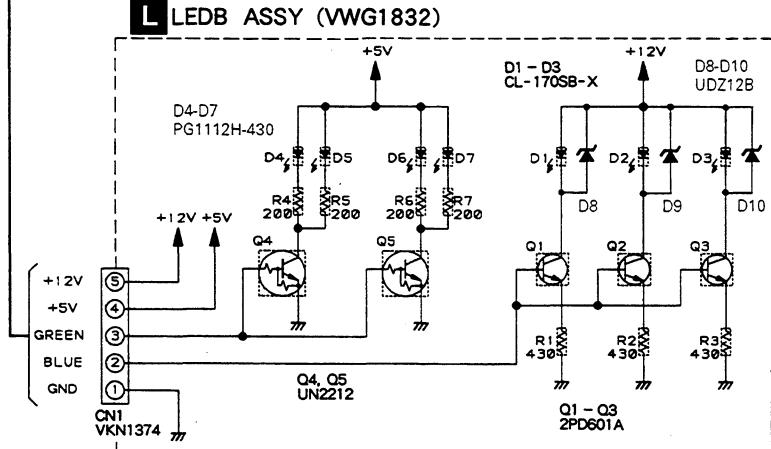
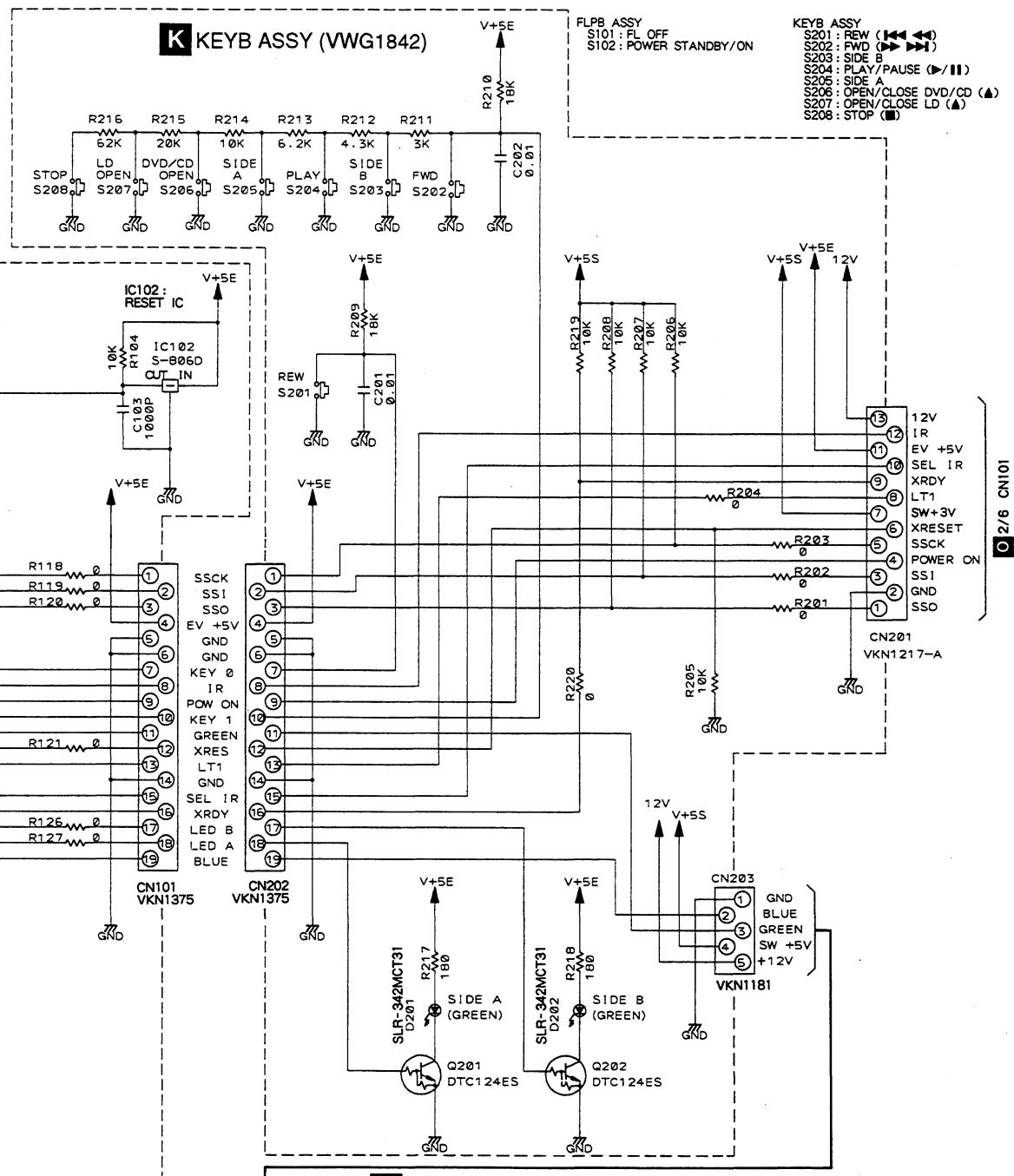
- In case of repairing, use the described parts only to prevent an accident.
- Please write the red mark on the board when the primary section of POWER SUPPLY (SYPS) Assy is repaired.
- Please take care to keep the space, not touching other parts when replacing the parts.

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 491001 MFD.
BY LITTELFUSE INC. FOR P205 AND P211, 4911.25 MFD.
BY LITTELFUSE INC. FOR P209 AND P210.



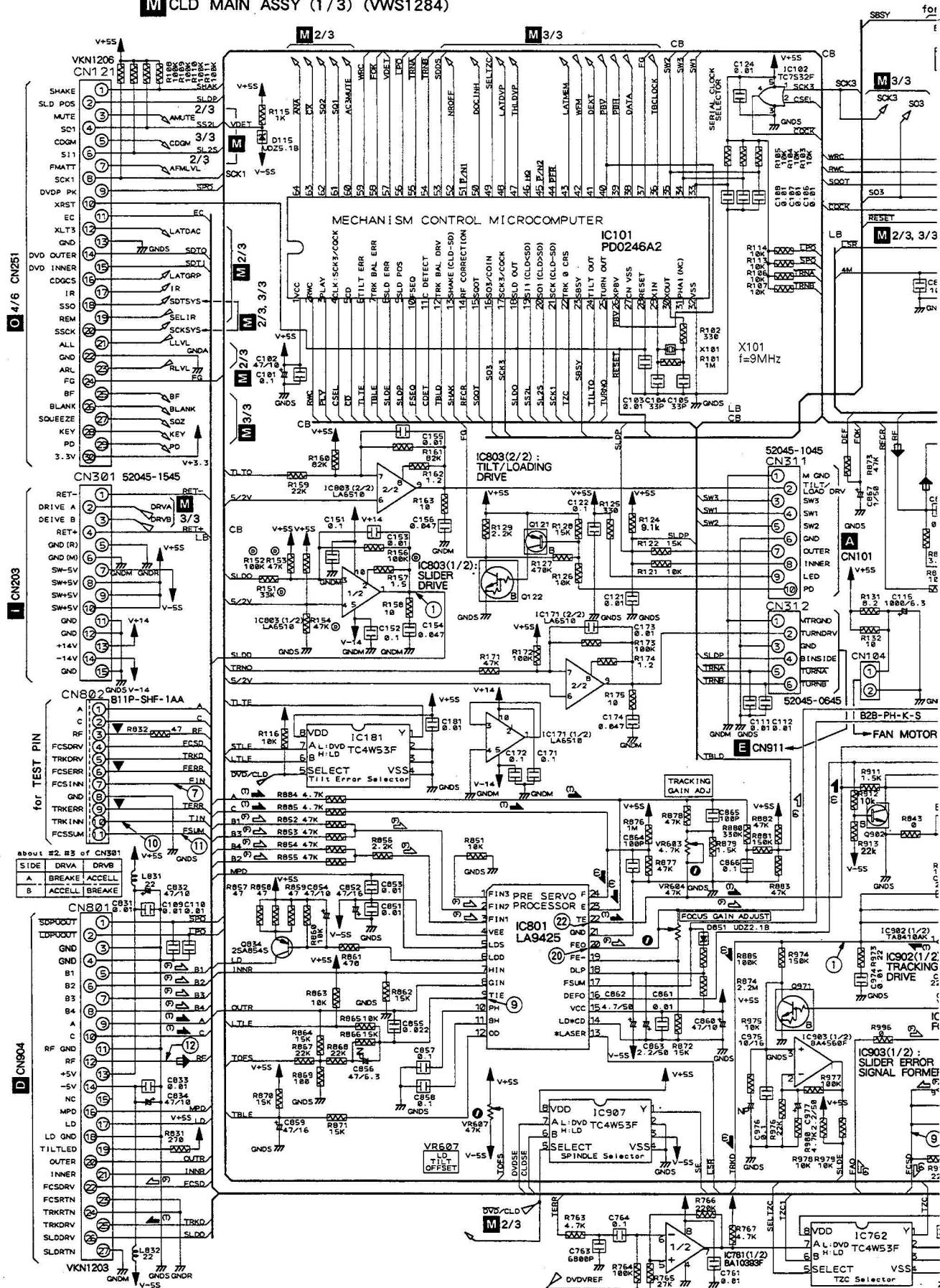
3.3 FLPB, KEYB AND LEDB ASSEMBLIES

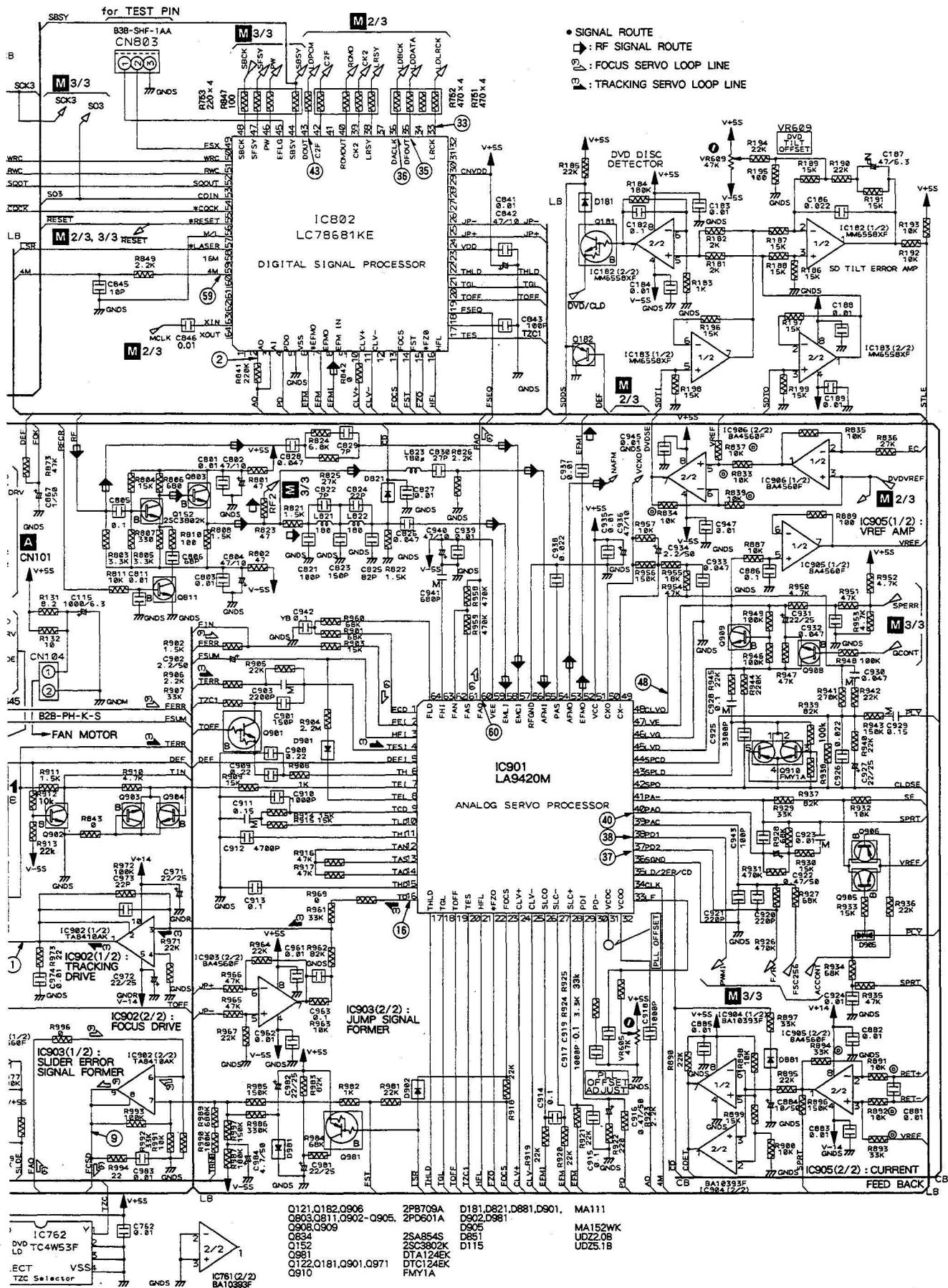




3.4 CLD MAIN ASSY (1/3)

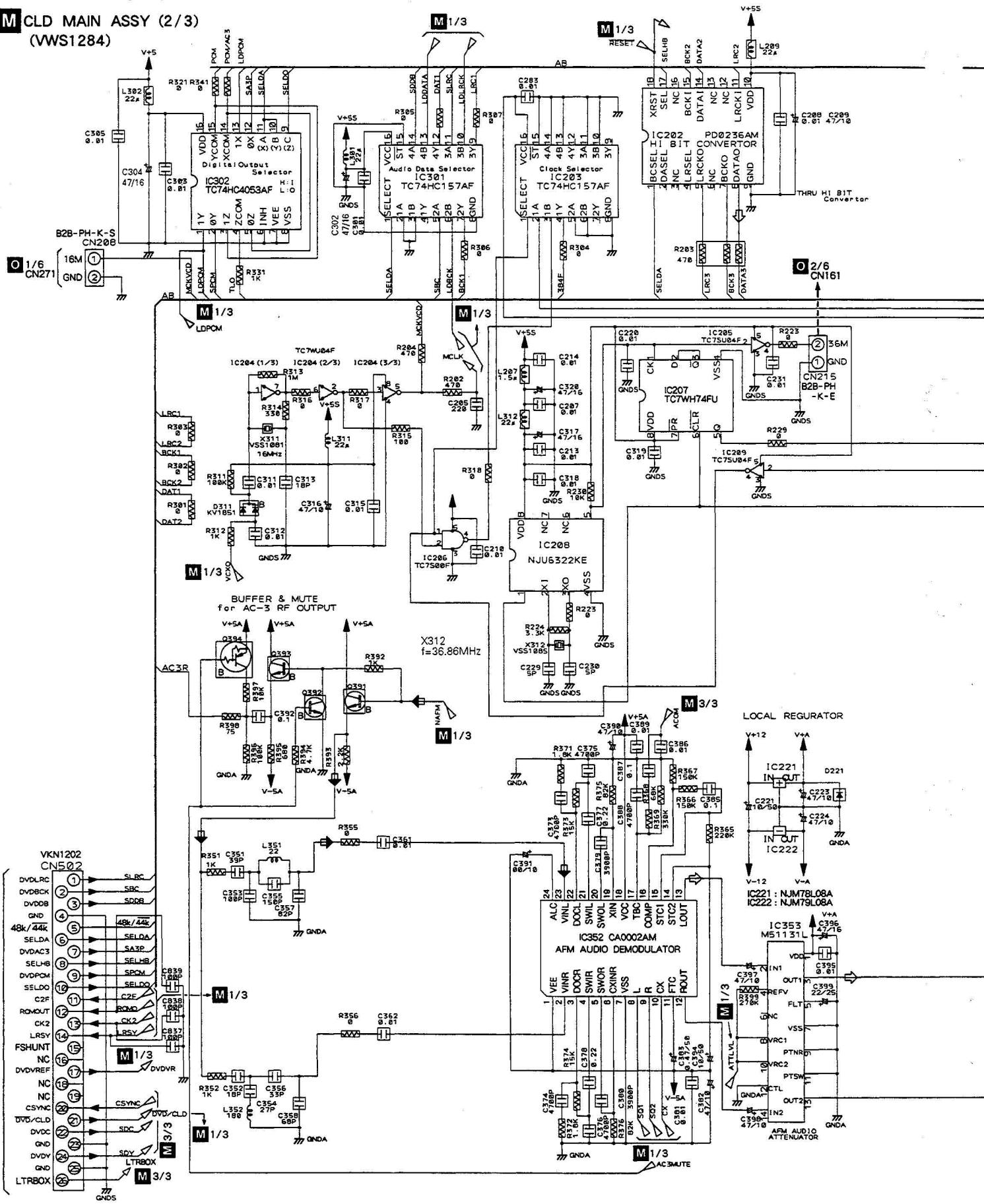
M CLD MAIN ASSY (1 / 3) (VWS1284)



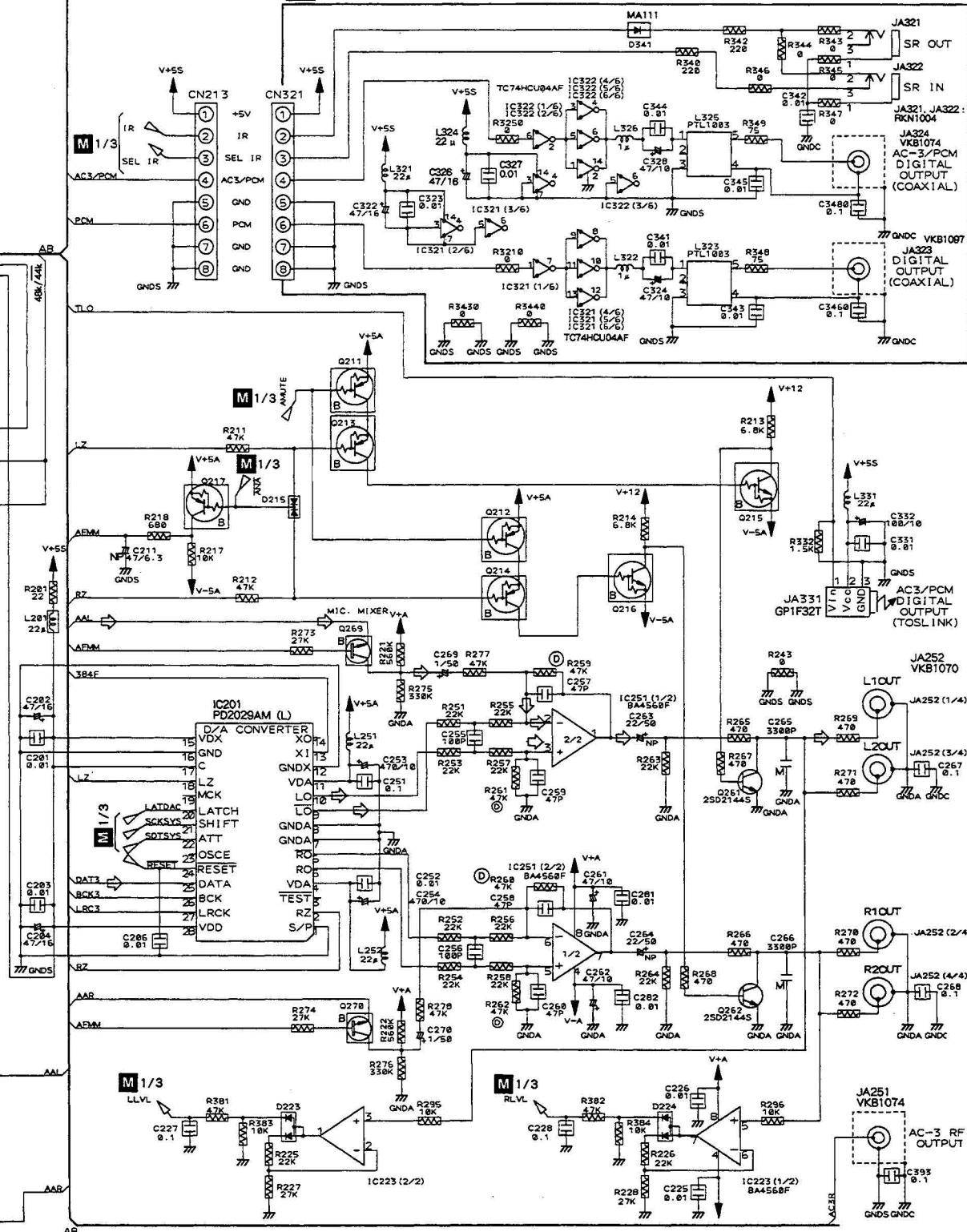


3.5 CLD MAIN (2/3) AND JCKB ASSEMBLIES

M CLD MAIN ASSY (2/3)
(VWS1284)



N JCKB ASSY (WV1532)

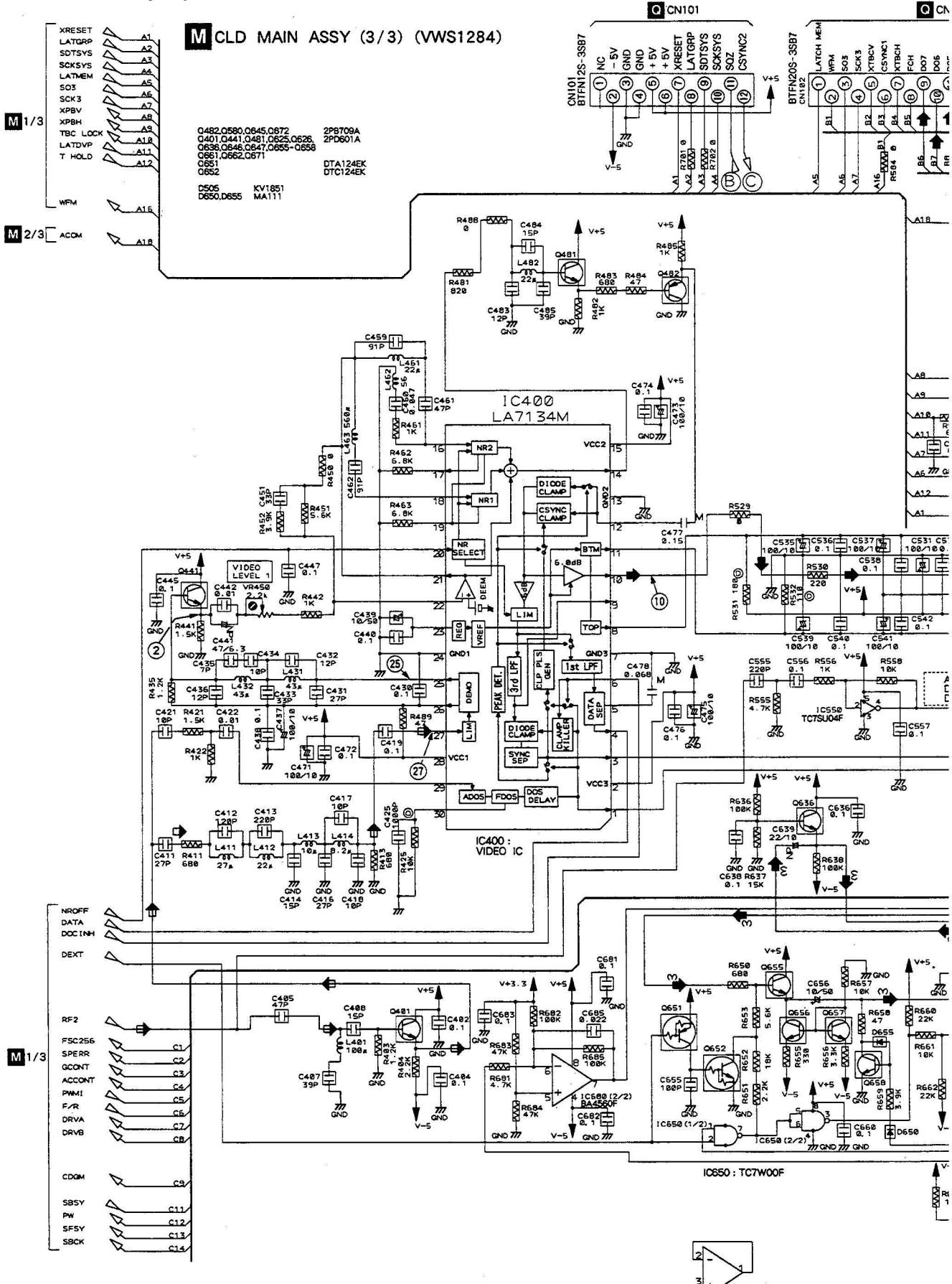


Q269, Q270, Q391-Q393 2PD601A
Q261, Q262 2SD2144S
Q211-Q214, Q217, Q394 DTA124EK
Q215, Q216 DTC124EK

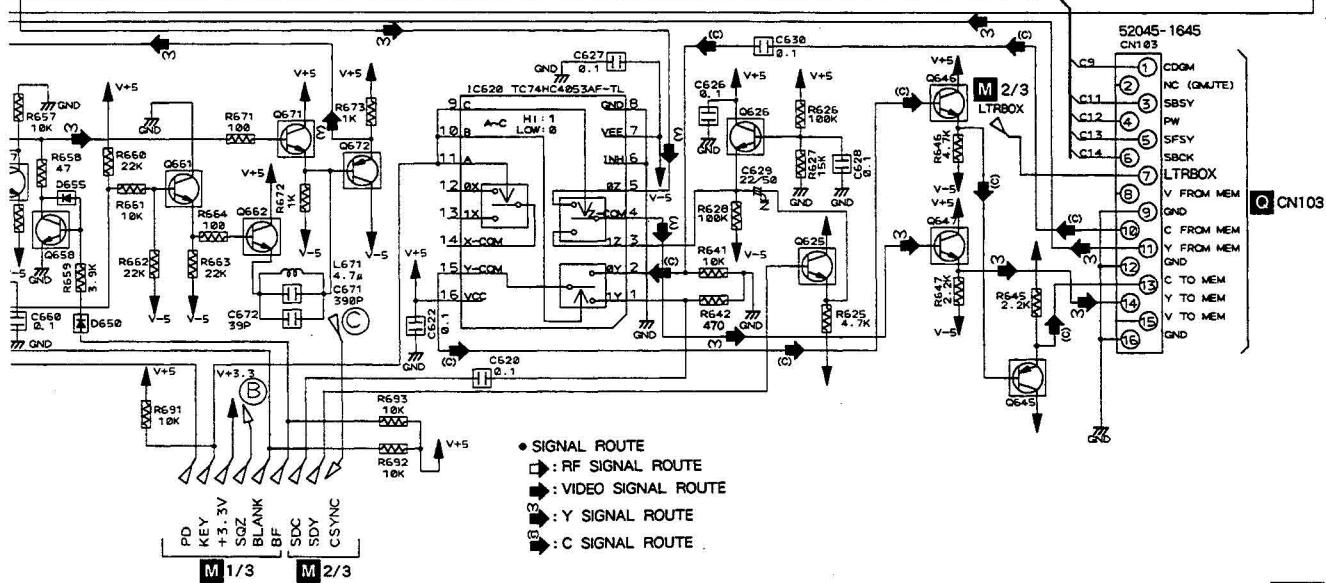
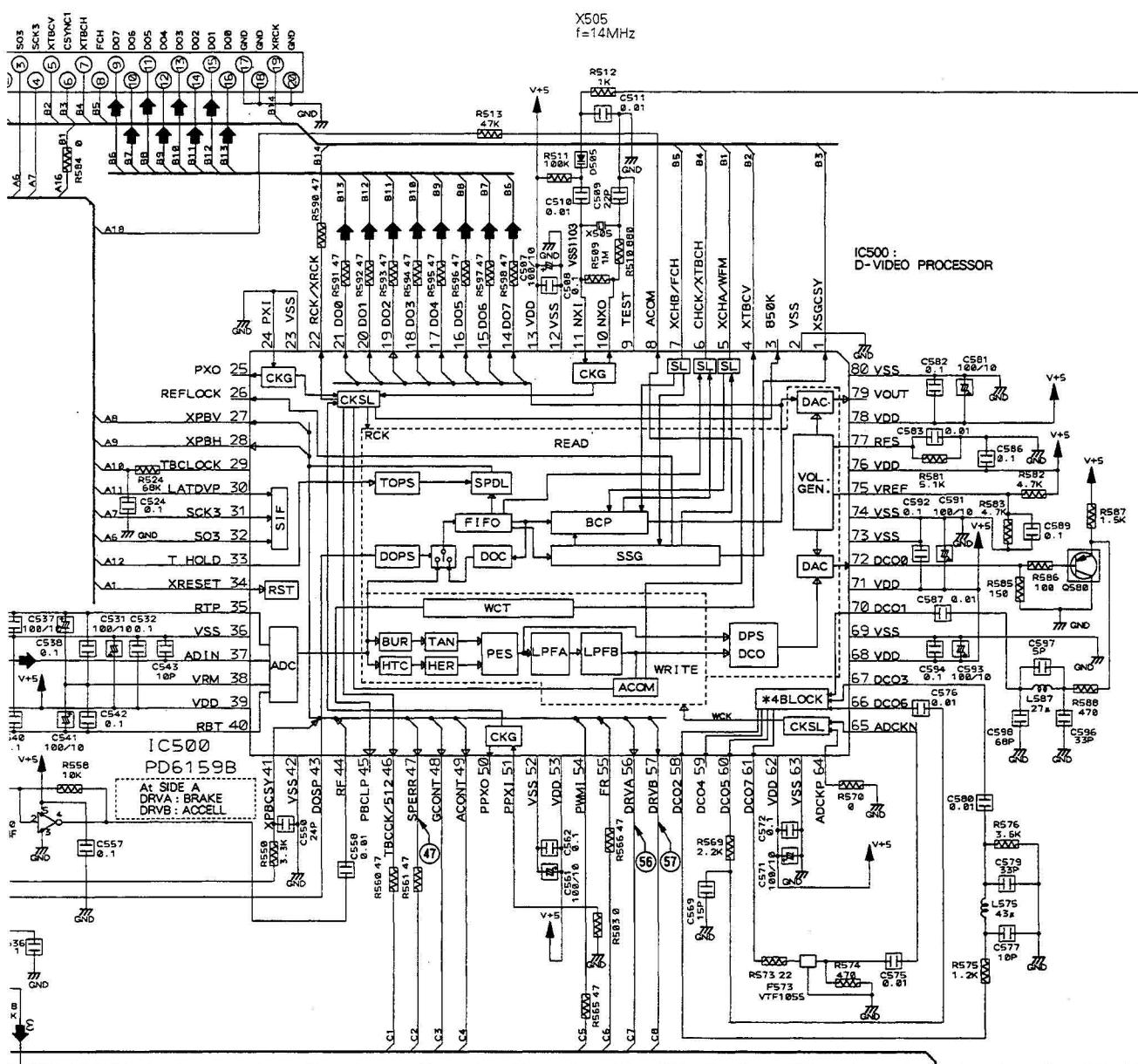
- SIGNAL ROUTE
 - ➡: RF SIGNAL ROUTE
 - ➡: AUDIO SIGNAL ROUTE

D221 EC10QS04
D311 KV1851
D223,D224 MA152WA
D215 MA152WK

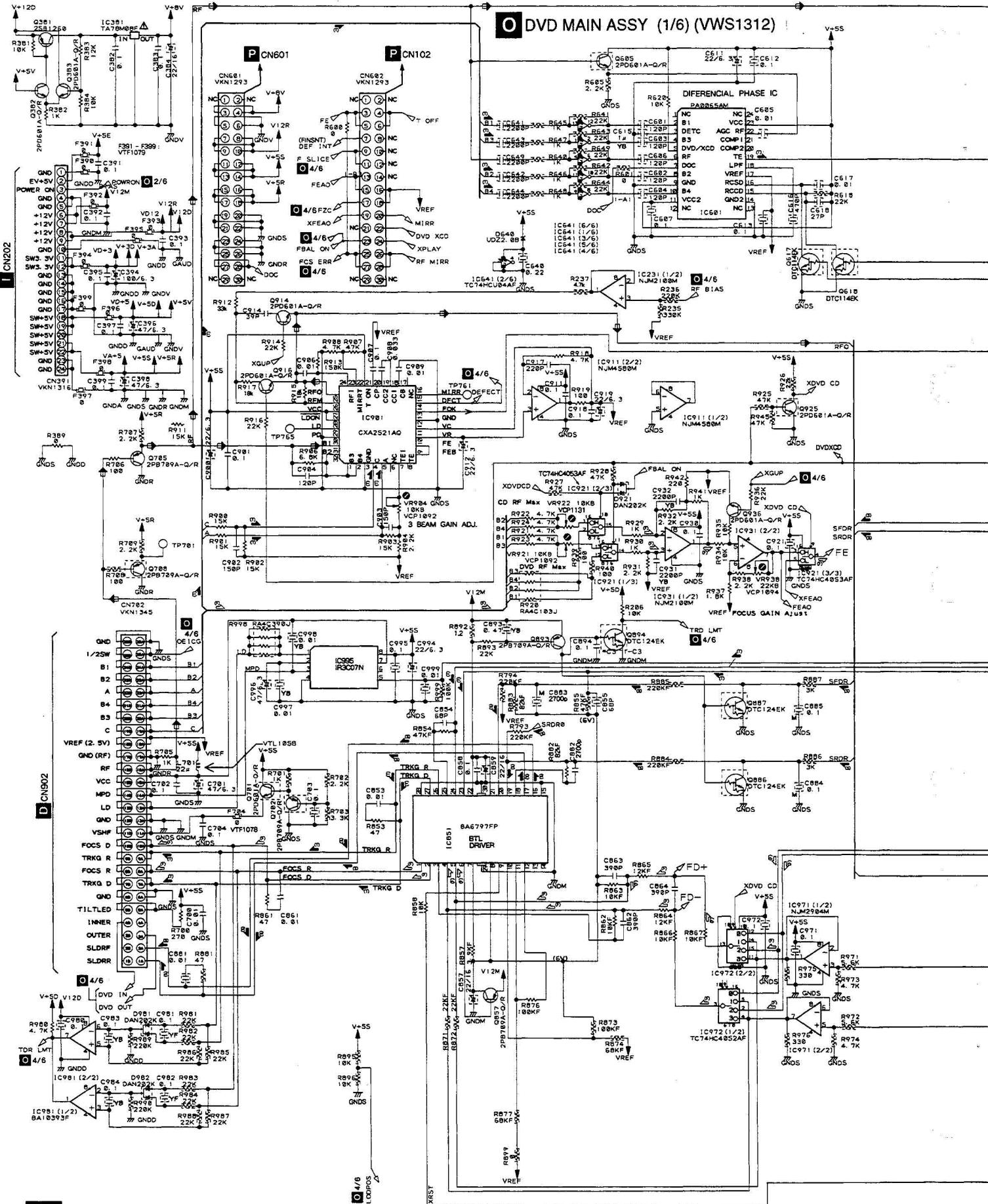
3.6 CLD MAIN ASSY (3/3)

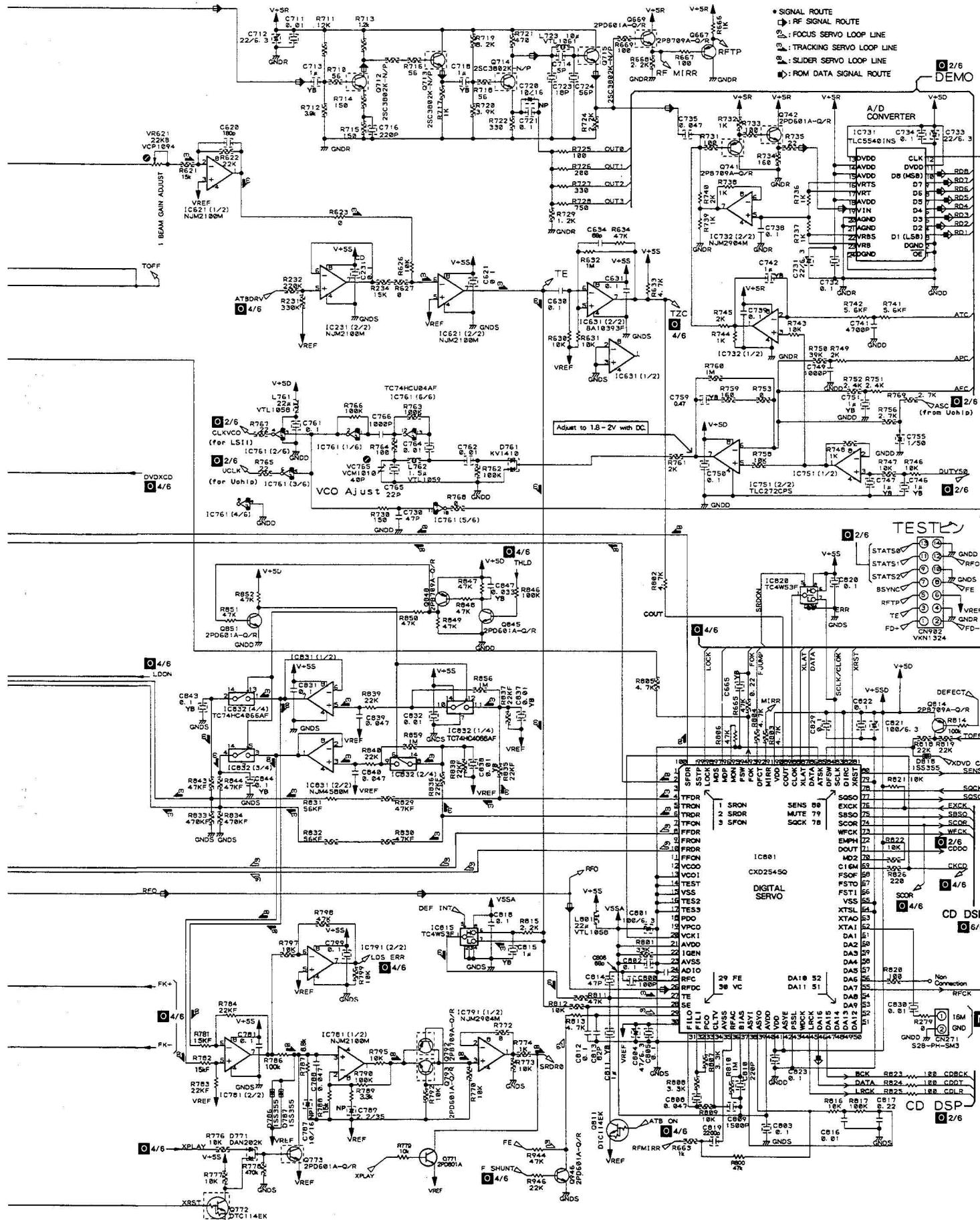


Q CN102

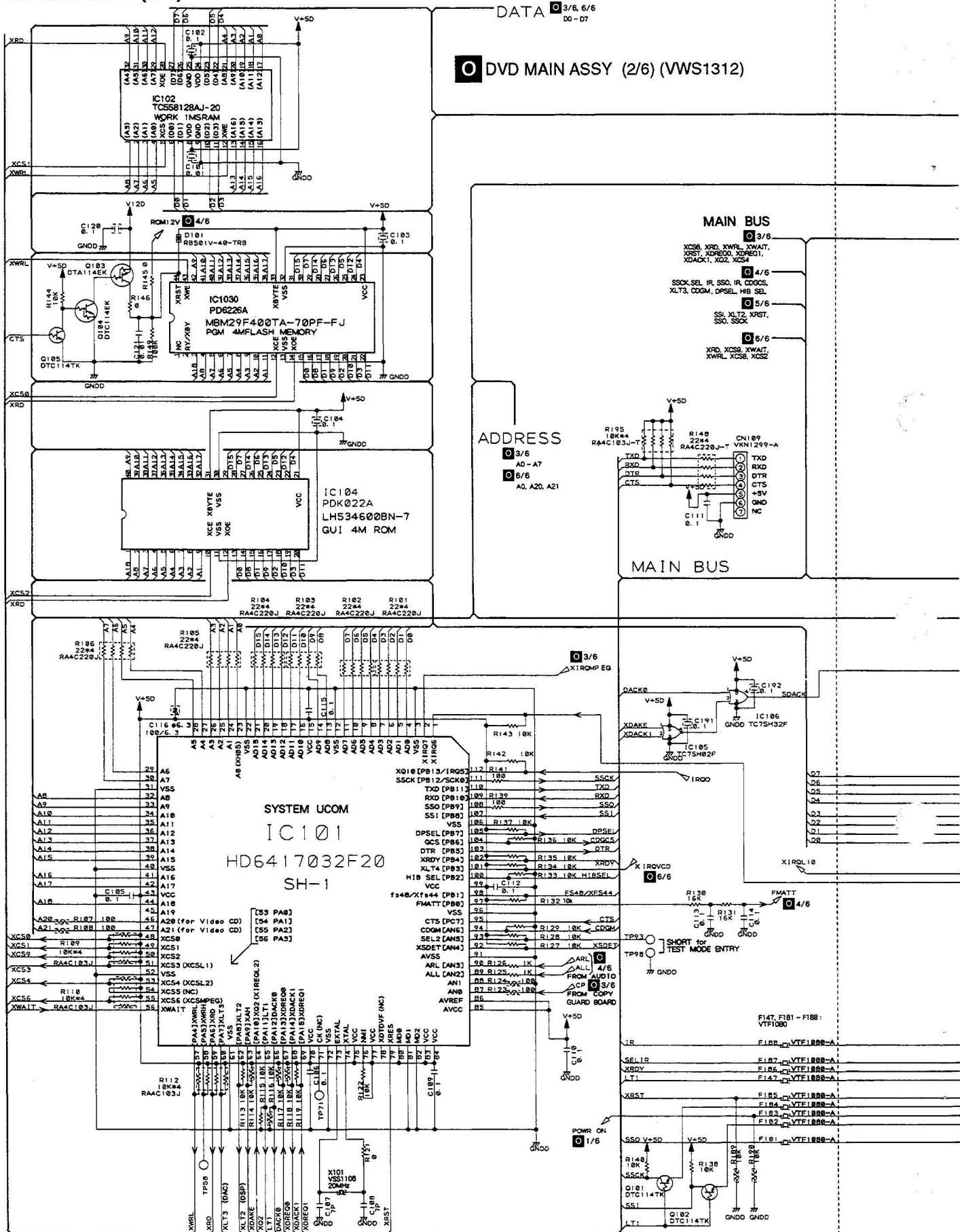


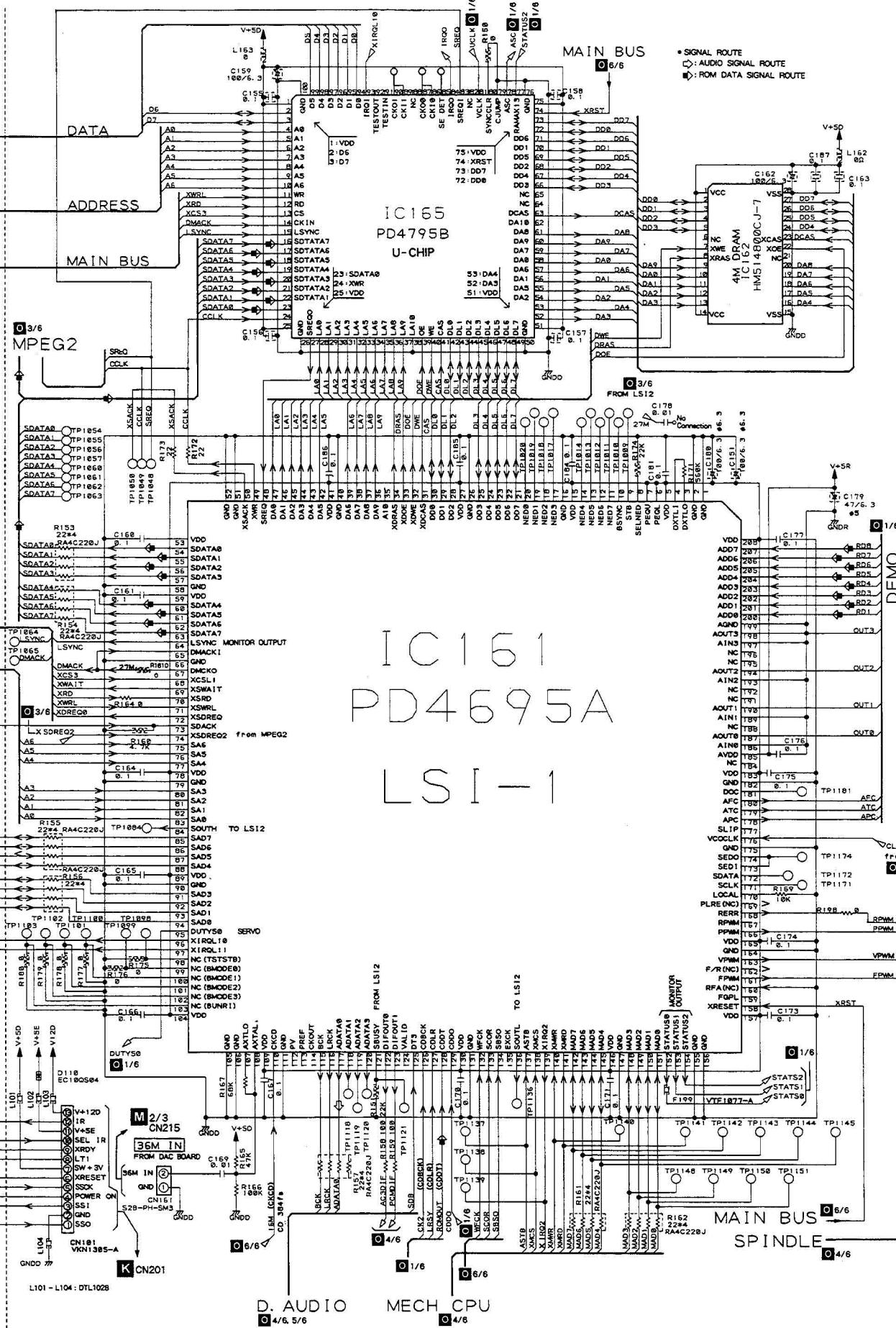
3.7 DVD MAIN ASSY (1/6)





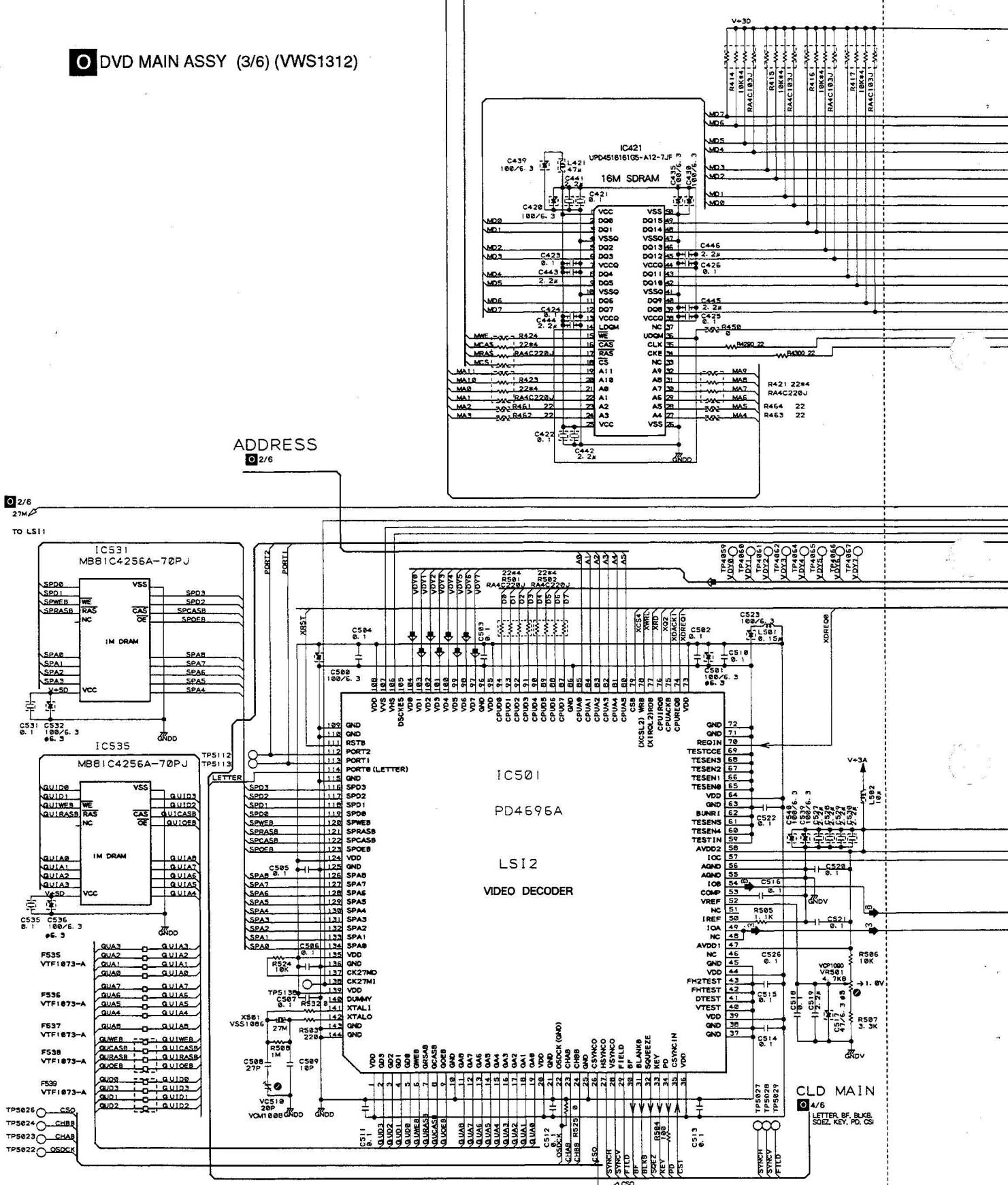
3.8 DVD MAIN ASSY (2/6)

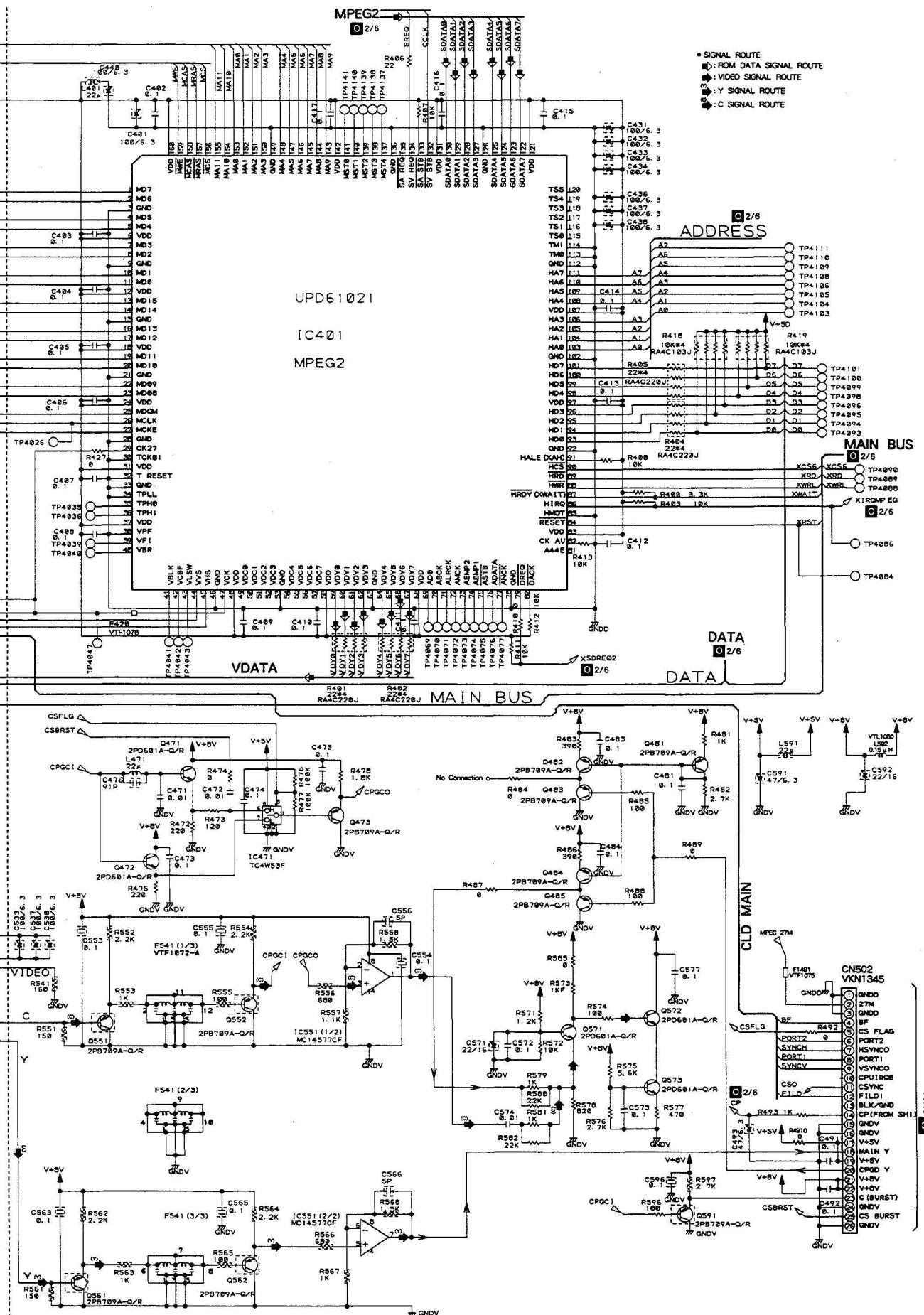




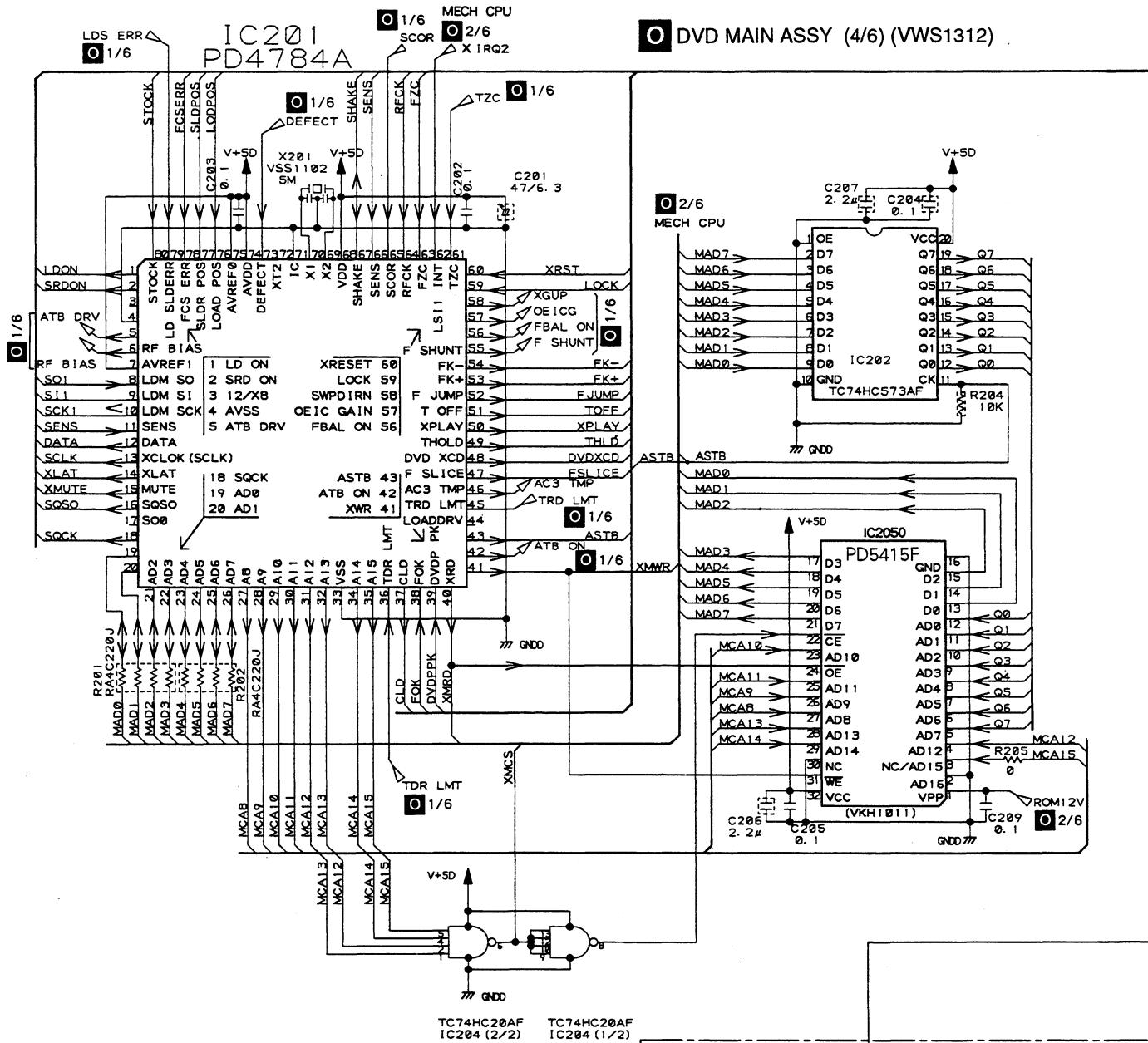
3.9 DVD MAIN ASSY (3/6)

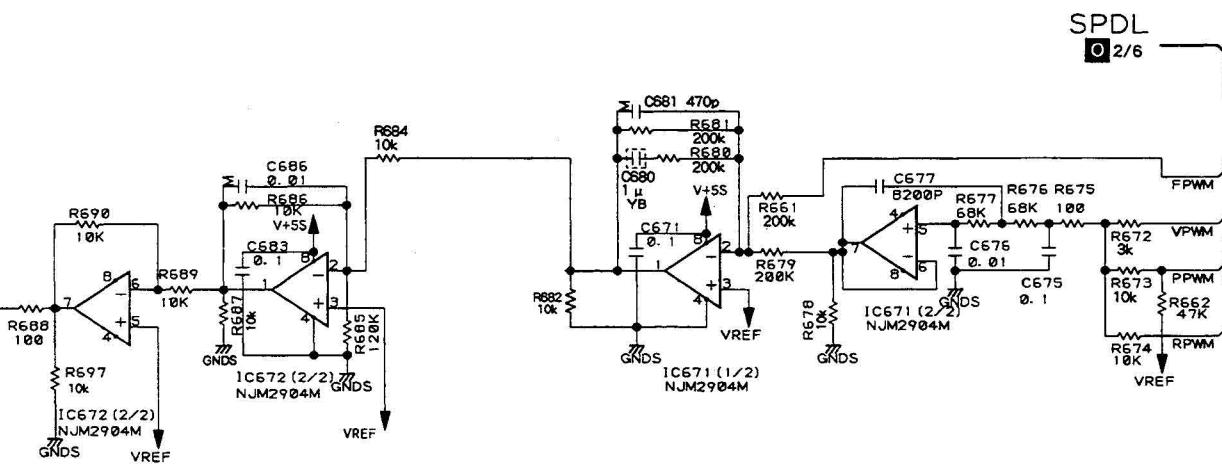
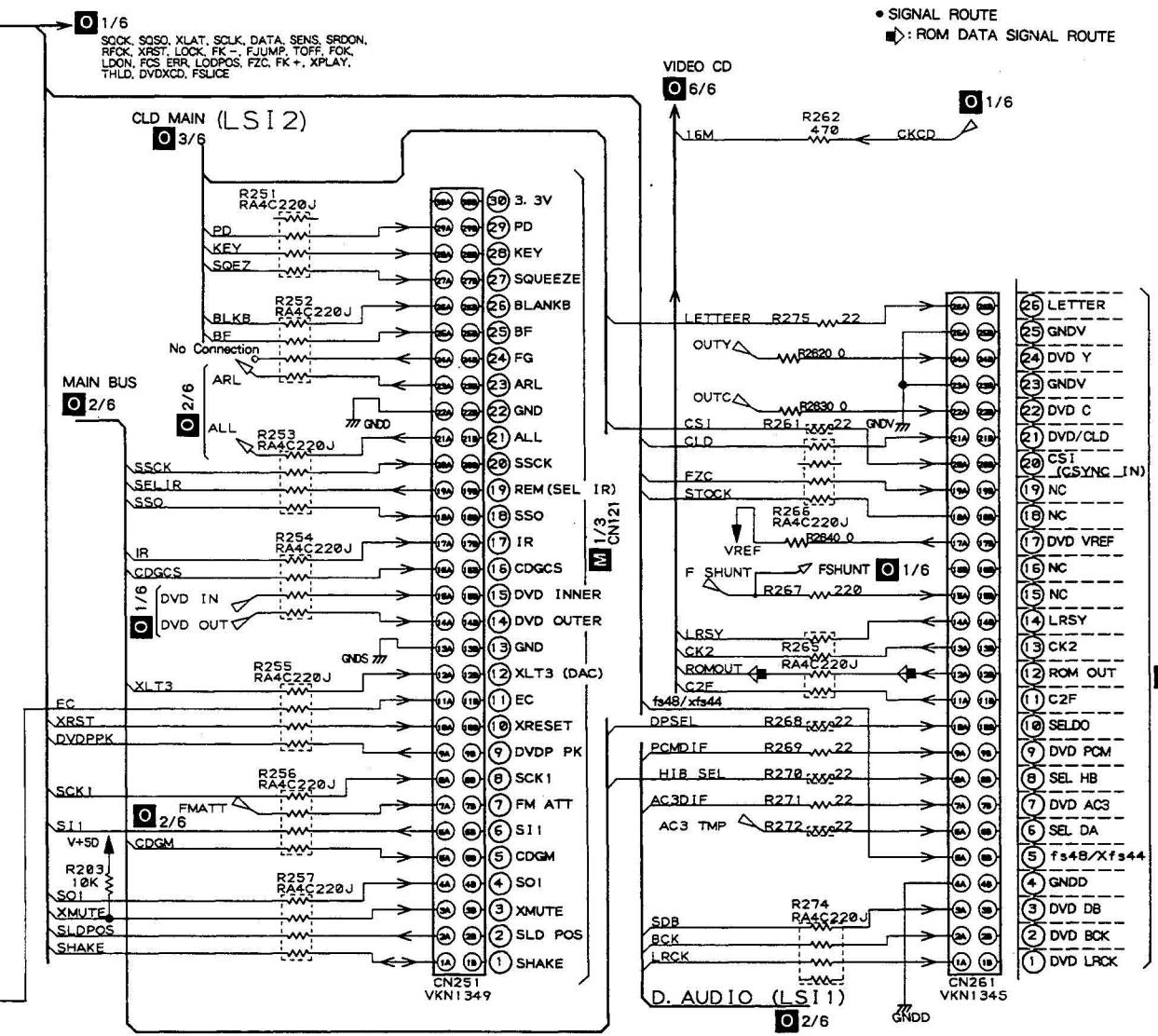
○ DVD MAIN ASSY (3/6) (VWS1312)





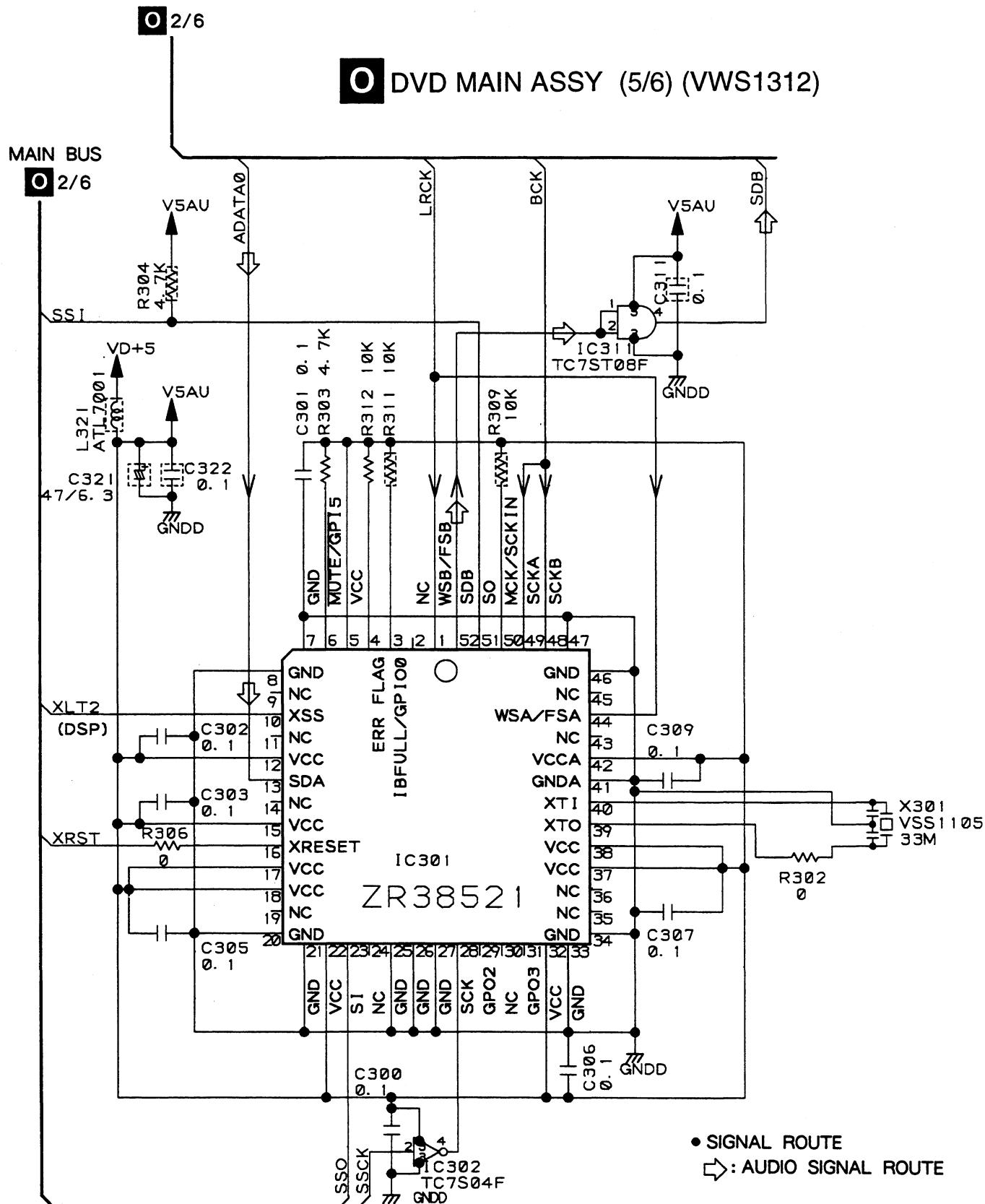
3.10 DVD MAIN ASSY (4/6)





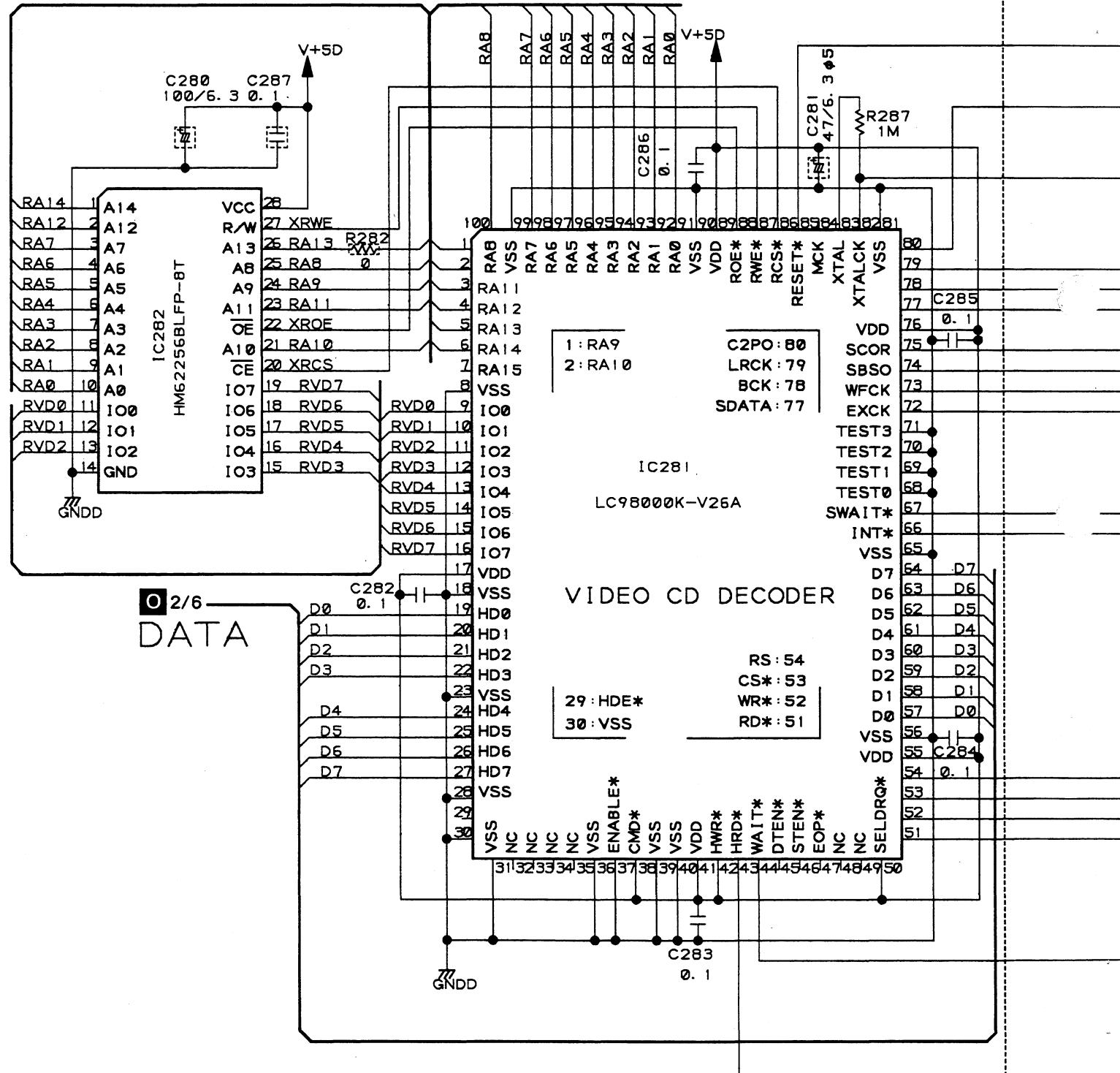
3.11 DVD MAIN ASSY (5/6)

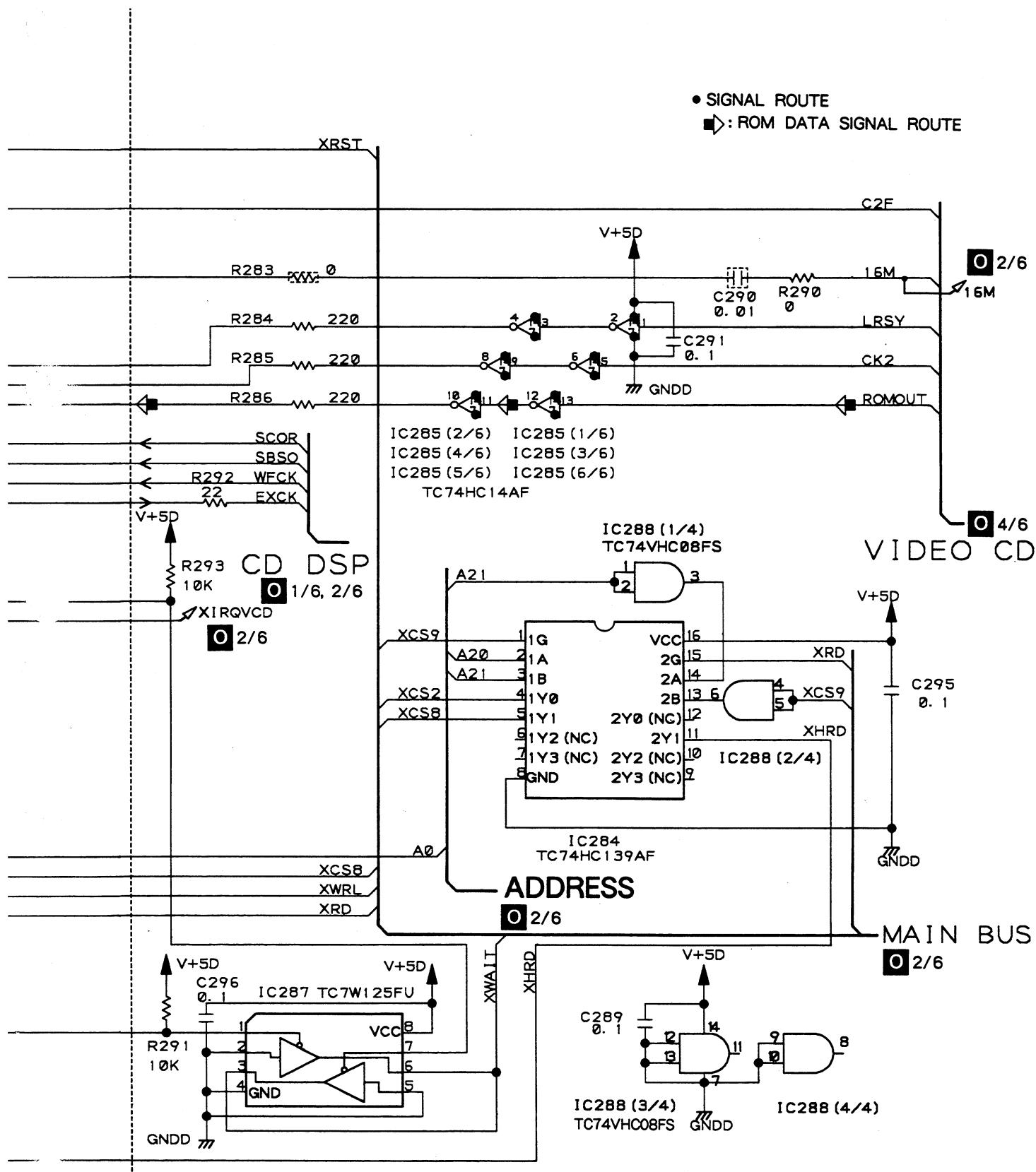
D. AUDI O



3.12 DVD MAIN ASSY (6/6)

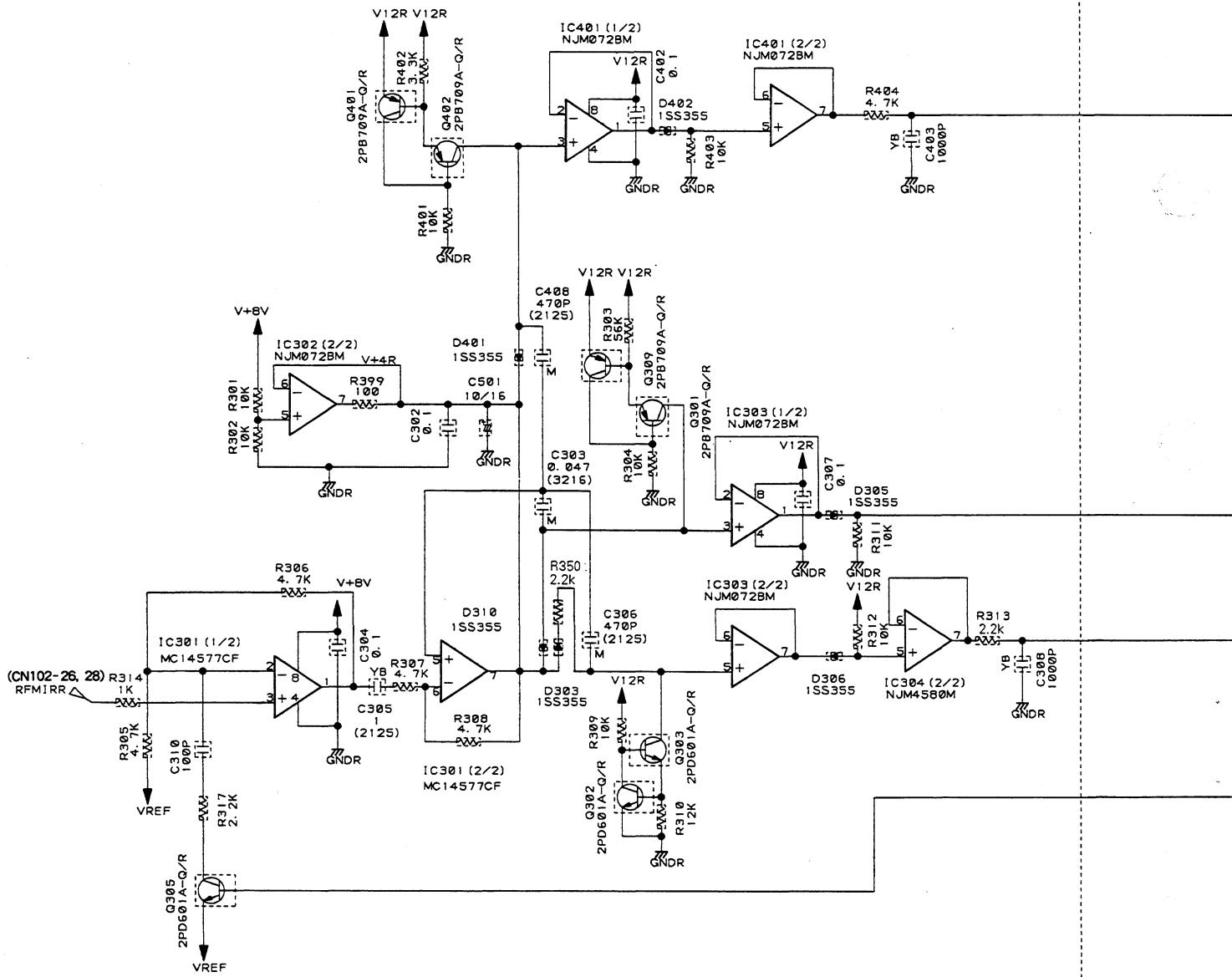
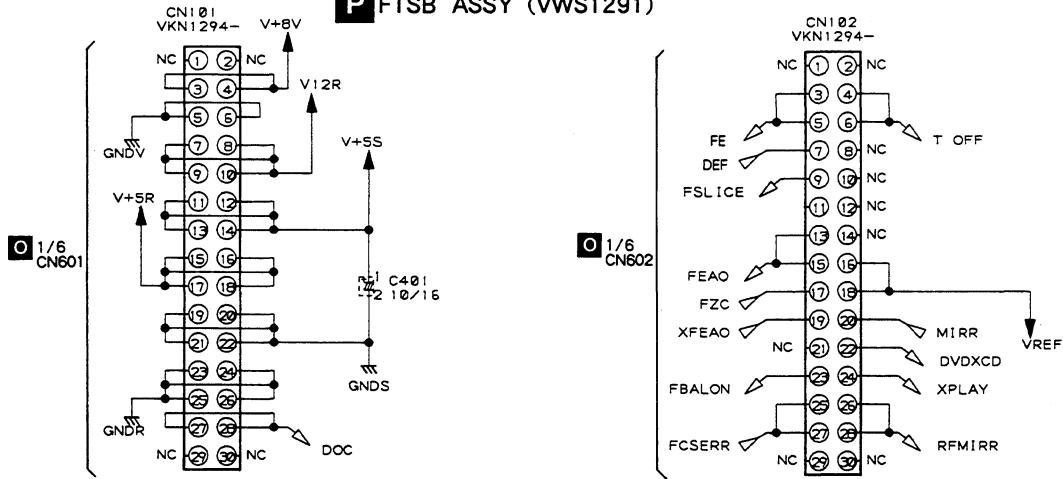
O DVD MAIN ASSY (6/6) (VWS1312)

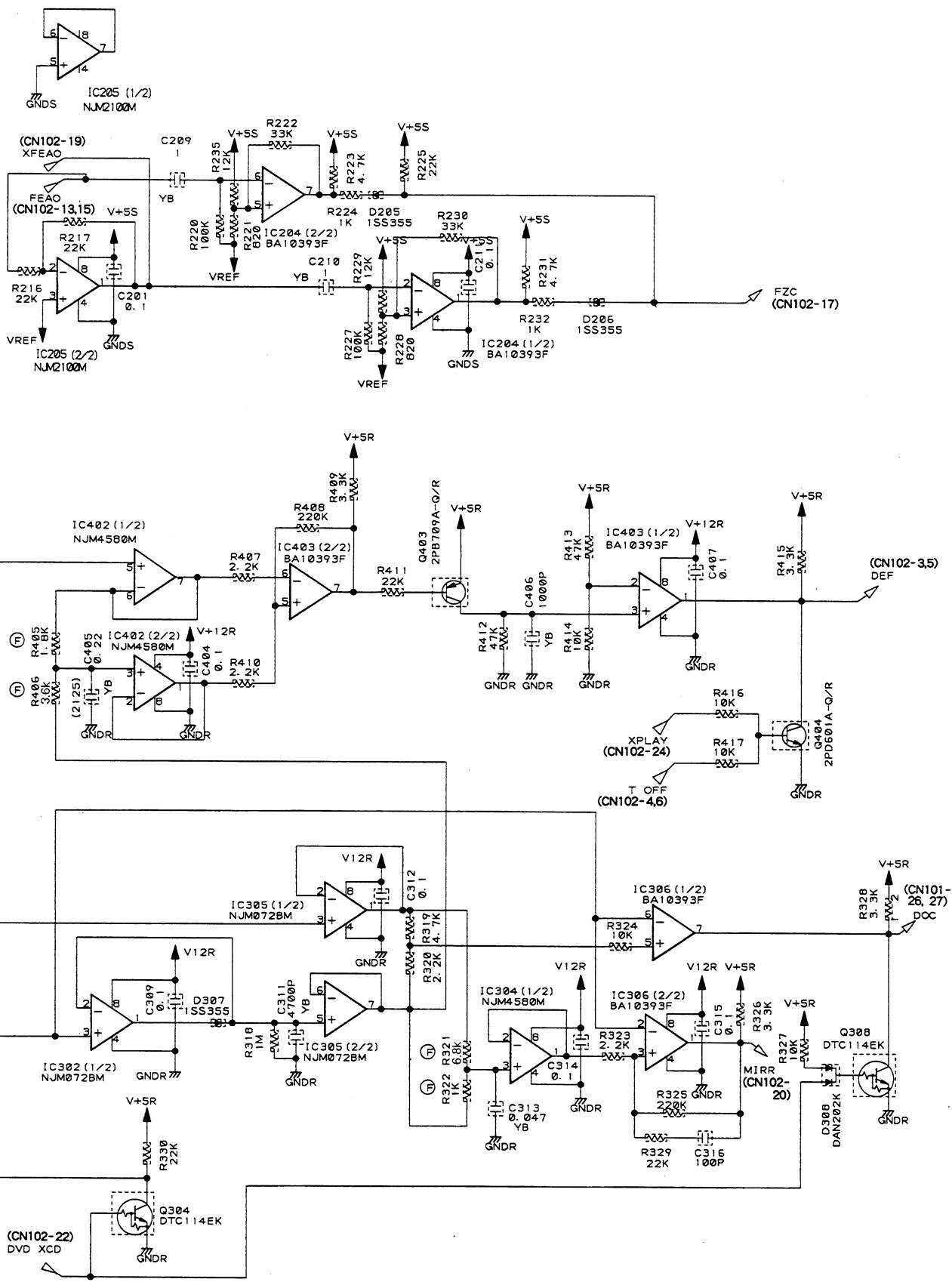




3.13 FTSB ASSY

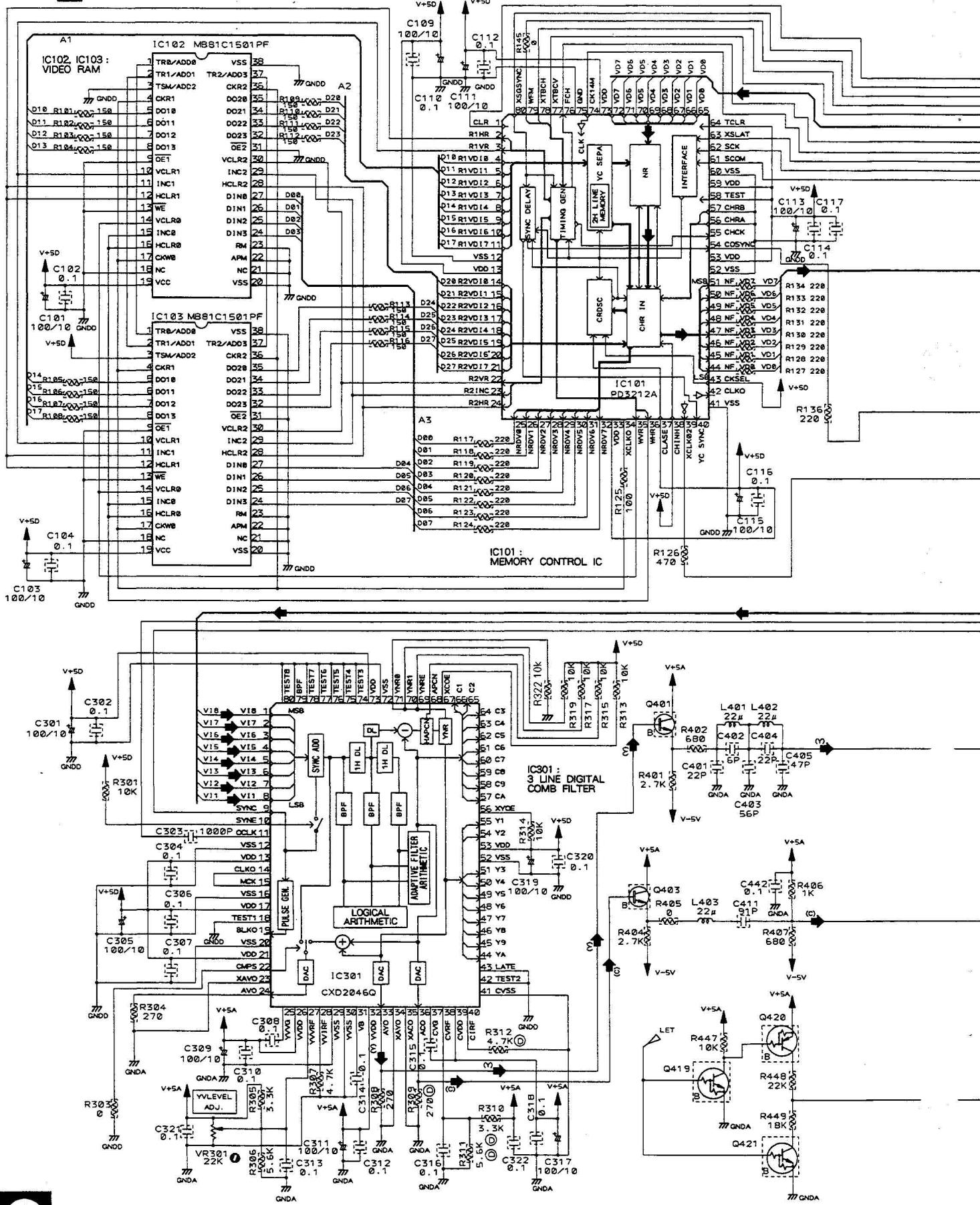
P FTSB ASSY (VWS1291)

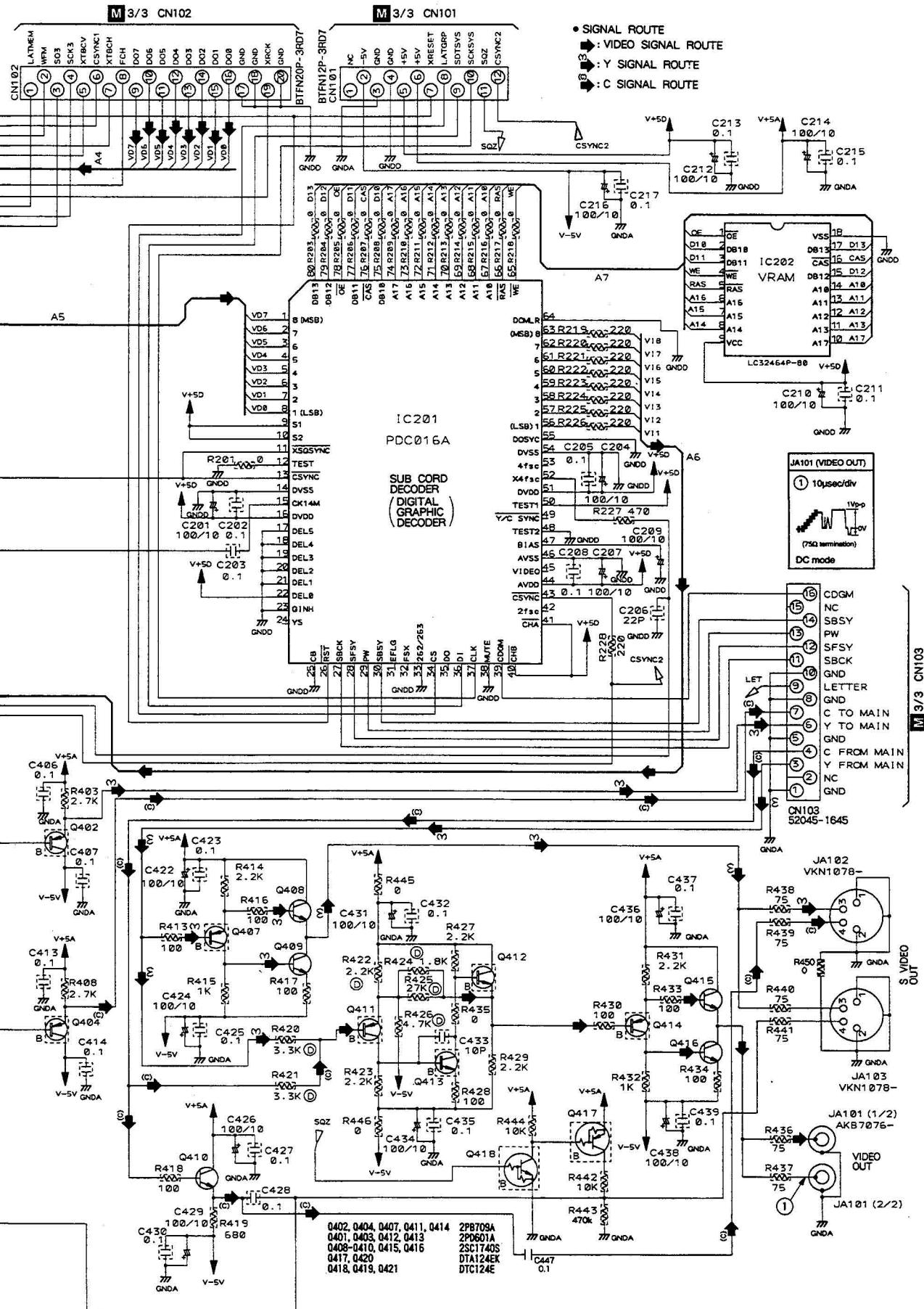




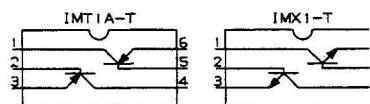
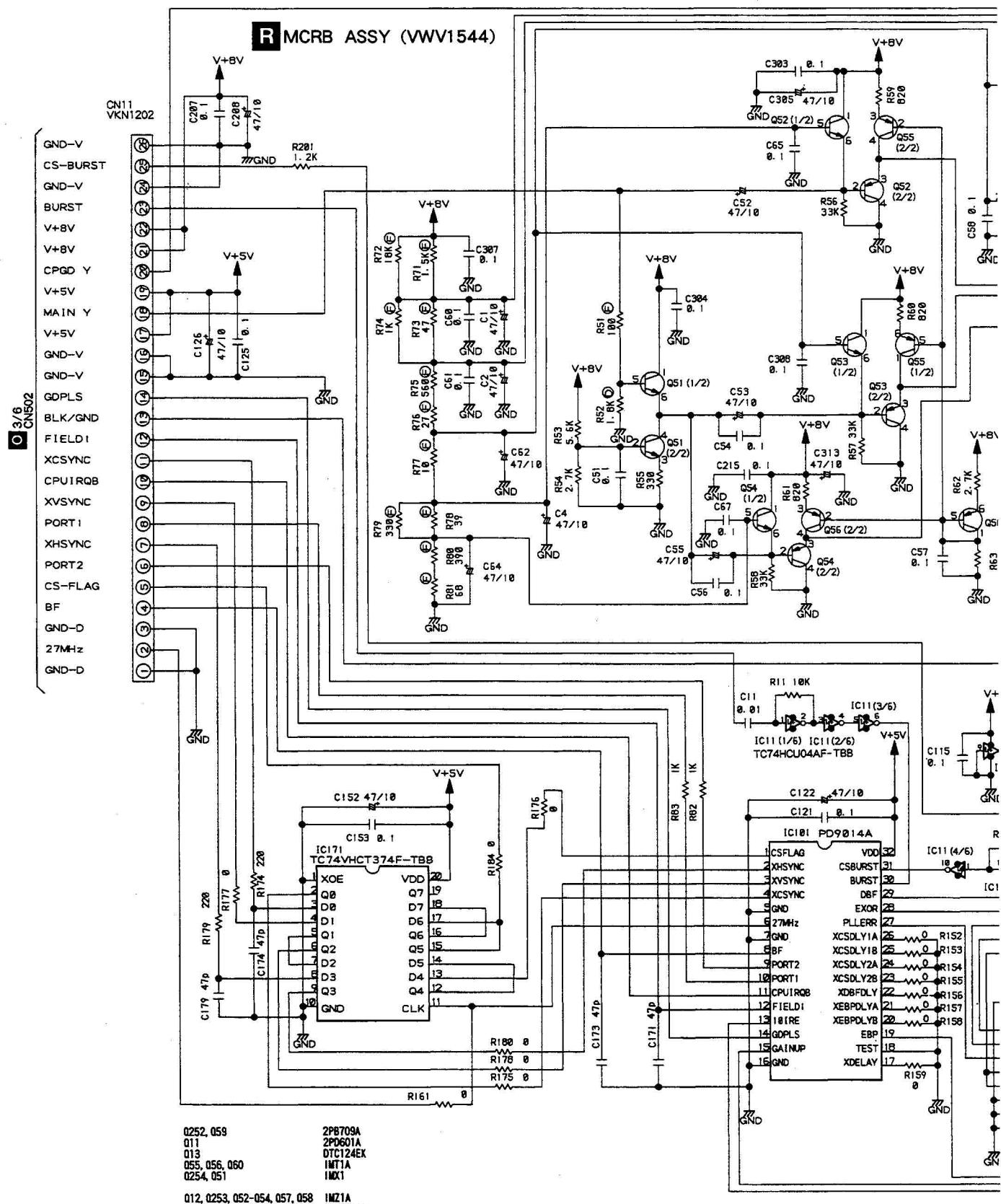
3.14 MGYCB ASSY

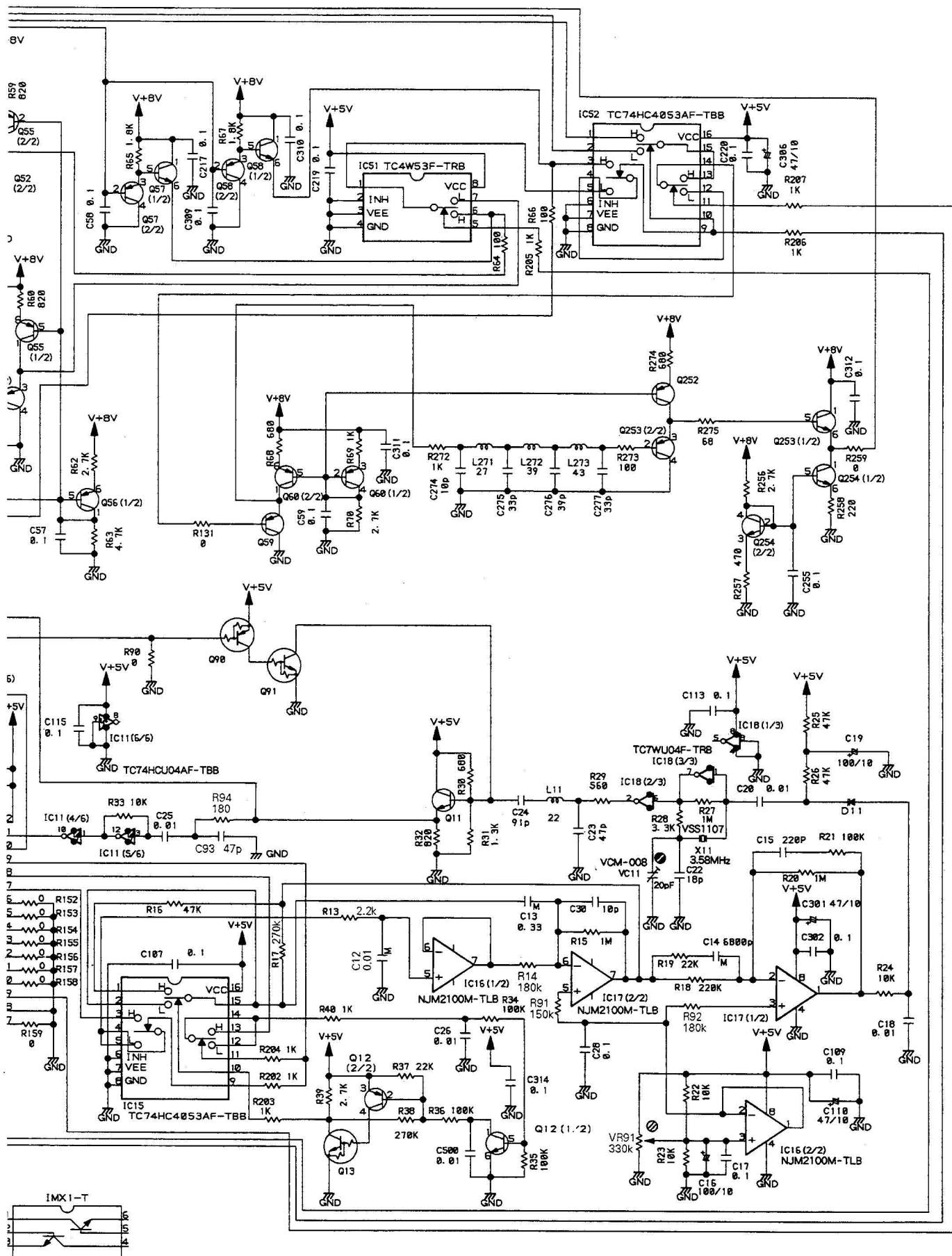
Q MGYCB ASSY (VWV1468)





3.15 MCRB ASSY



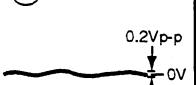
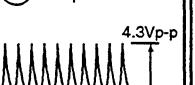
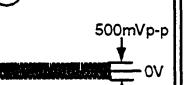
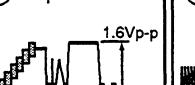
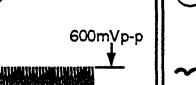
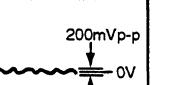
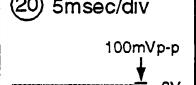
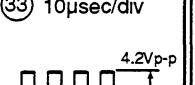
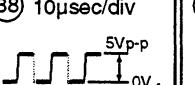
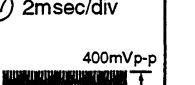
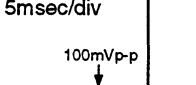
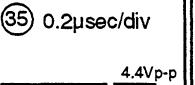
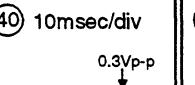
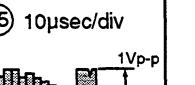
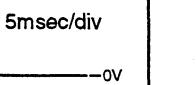
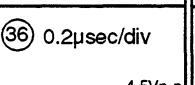
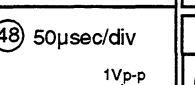
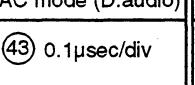
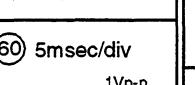
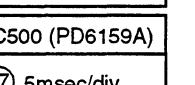
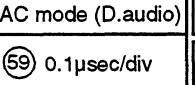
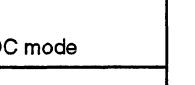
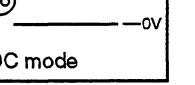
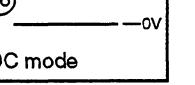
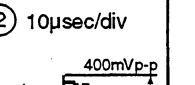
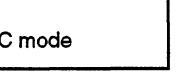


• WAVEFORMS AND VOLTAGE

Note : (No.) in the table correspond to the pin number.

Measurement condition : In case when (D.audio) is written, at time when disc that has digital audio recording is played.

M CLD MAIN ASSY

IC801 (LA9425)	IC802 (LC78681KE)	IC901 (LA9420M)	IC400 (LA7134M)	CN801	CN802
(9) 10msec/div  DC mode	(2) 0.1μsec/div  AC mode (D.audio)	(16) 5msec/div  DC mode	(10) 10μsec/div  DC mode	(12) 2msec/div  AC mode	(7) 5msec/div  DC mode
(20) 5msec/div  DC mode	(33) 10μsec/div  AC mode (D.audio)	(38) 10μsec/div  DC mode	(27) 2msec/div  AC mode		(10) 5msec/div  DC mode
(22) 5msec/div  DC mode	(35) 0.2μsec/div  AC mode (D.audio)	(40) 10msec/div  DC mode	(25) 10μsec/div  DC mode		(11) 5msec/div  DC mode
	(36) 0.2μsec/div  AC mode (D.audio)	(48) 50μsec/div  DC mode		IC500 (PD6159A)	
	(43) 0.1μsec/div  AC mode (D.audio)	(60) 5msec/div  DC mode		(47) 5msec/div  DC mode	
	(59) 0.1μsec/div  AC mode (D.audio)				
				(57) 10μsec/div  DC mode	
				(56)	
				IC902 (TA8410AK)	
			(1) 5msec/div  DC mode	(1) 5msec/div  DC mode	
			(2) 10μsec/div  AC mode		
IC803 (LA6510)			(9) 5msec/div  DC mode		

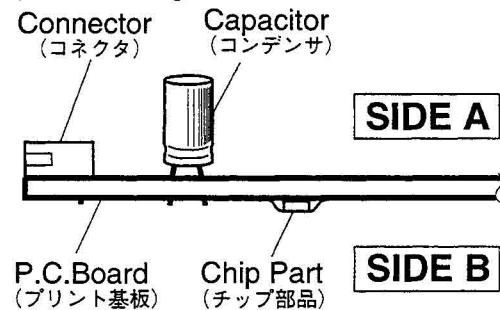
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

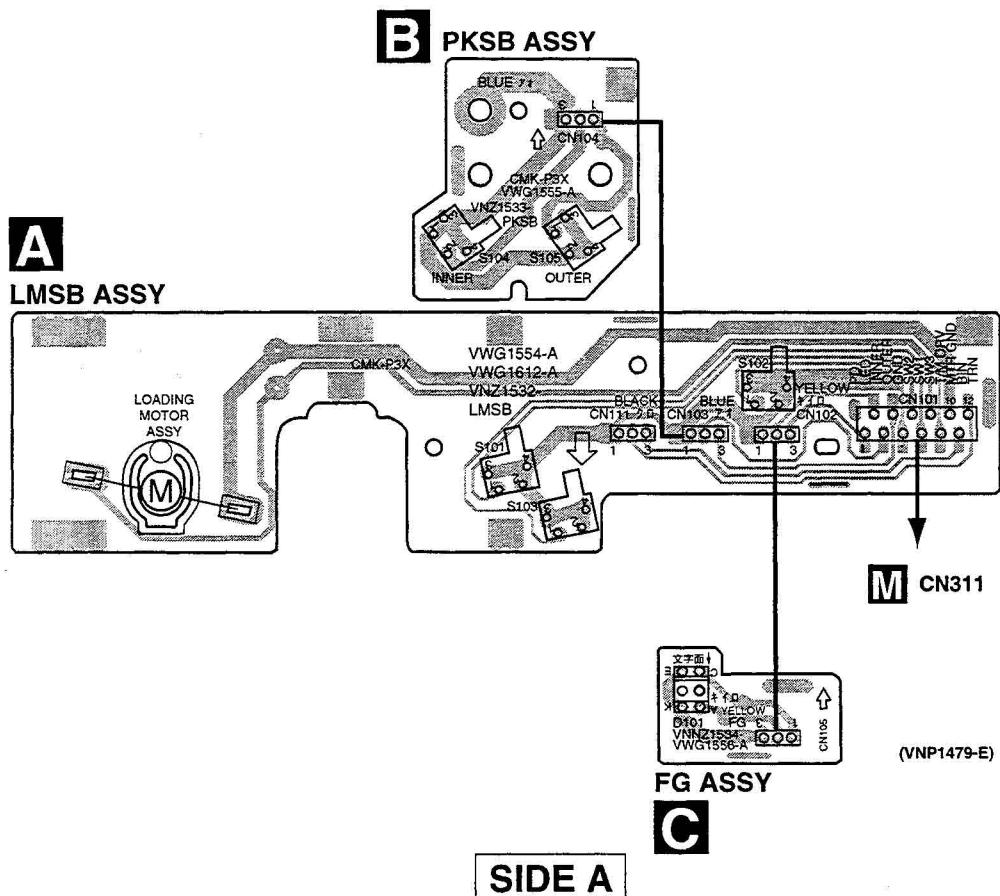
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

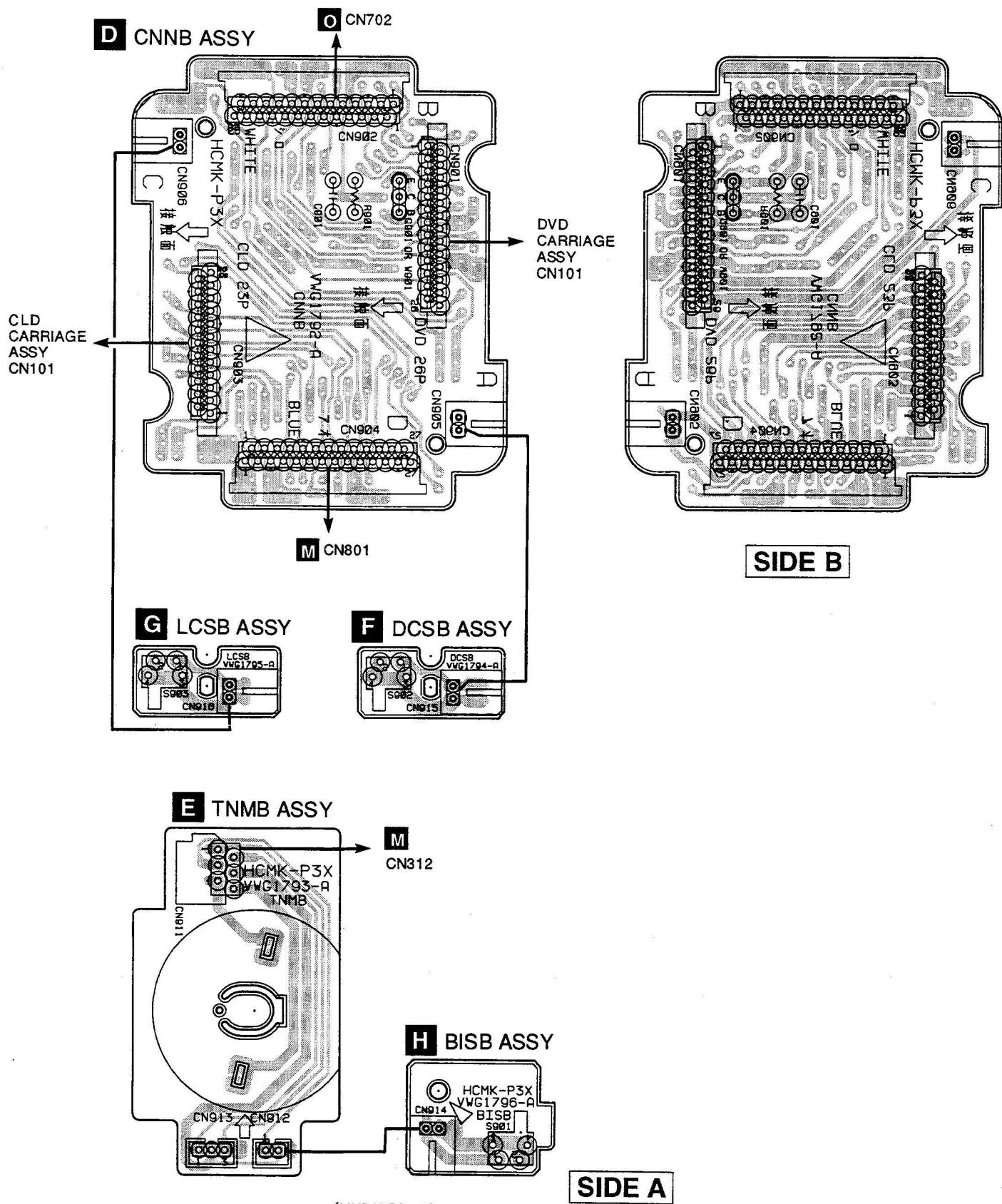
3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



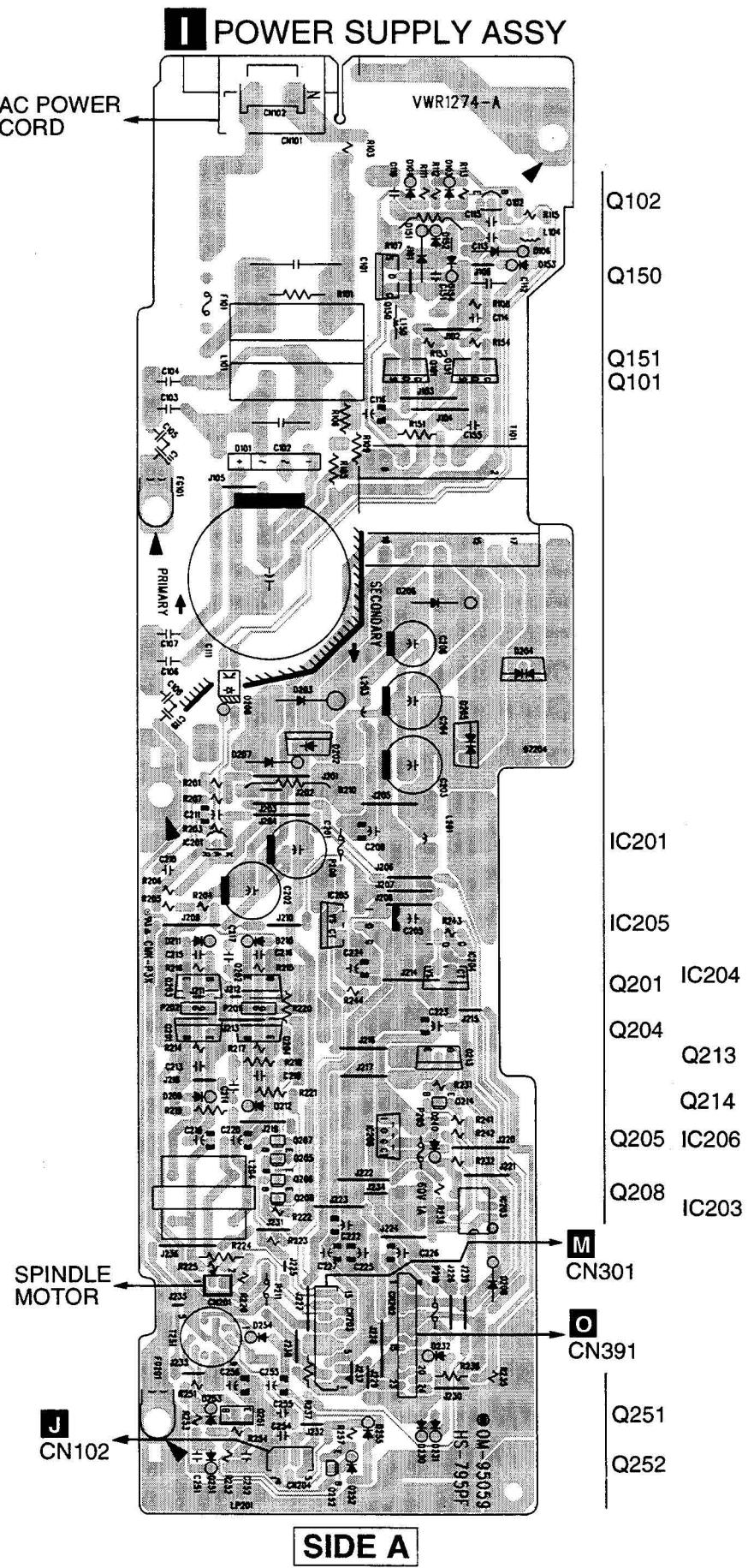
4.1 LMSB, PKSB AND FG ASSEMBLIES



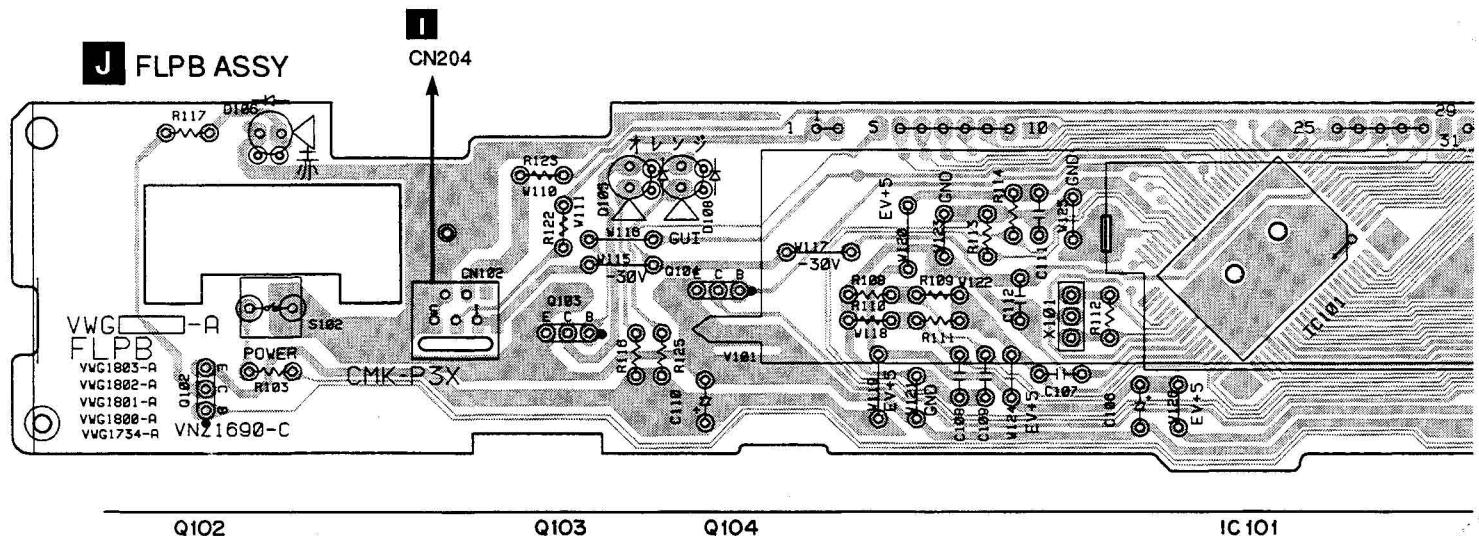
4.2 CNNB, TNMB, DCSB, LCSB AND BISB ASSEMBLIES



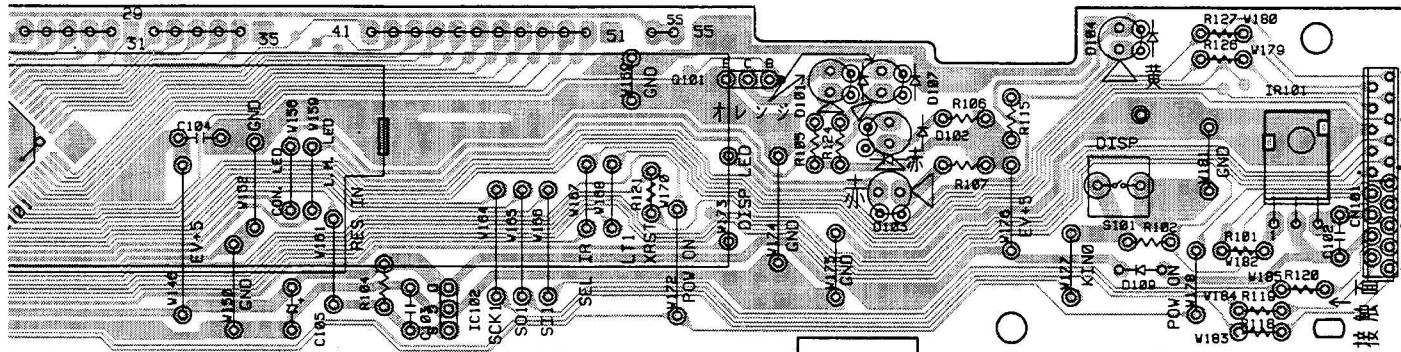
4.3 POWER SUPPLY ASSY



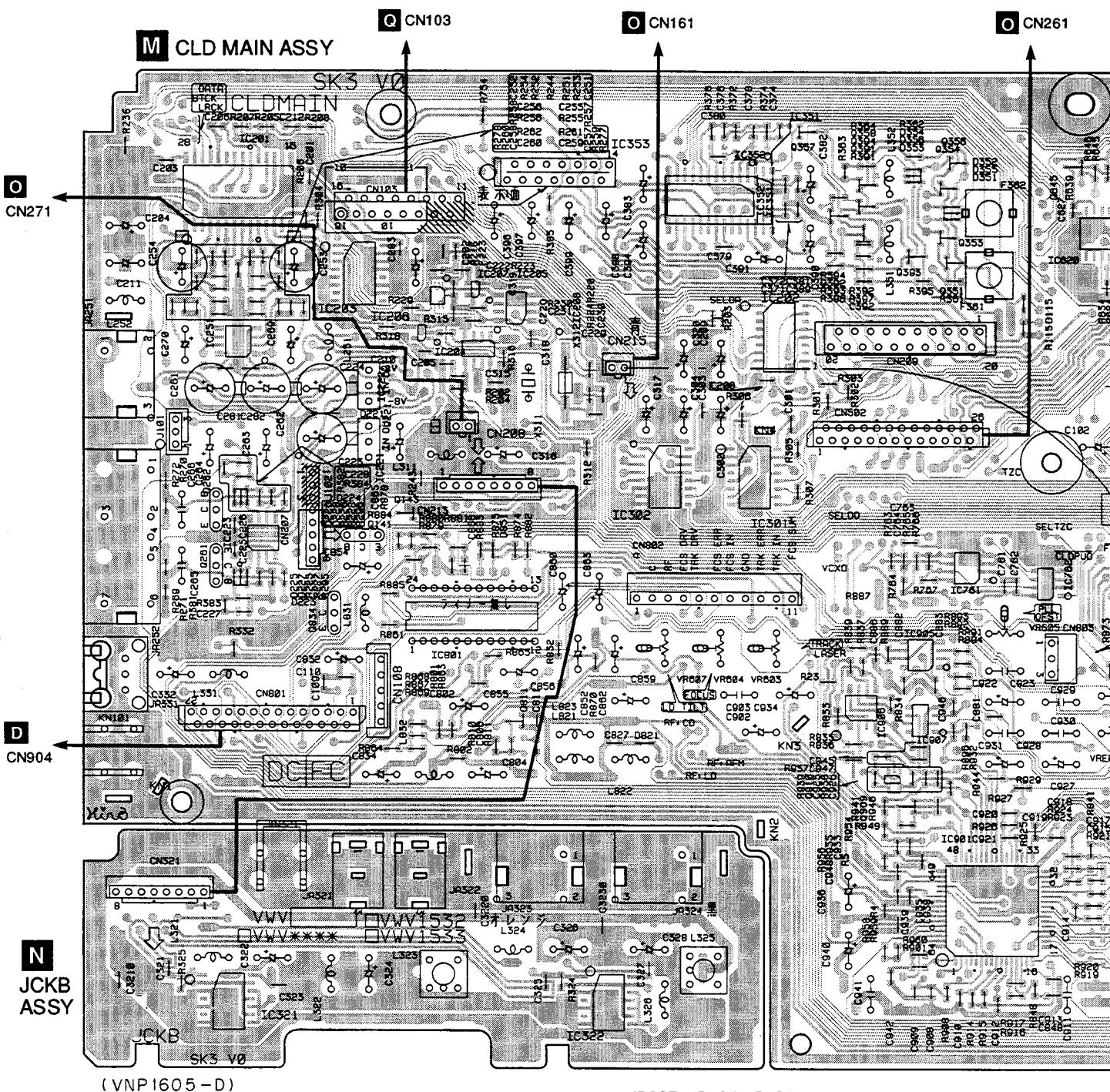
4.4 FLPB, KEYB AND LEDB ASSEMBLIES



SIDE A

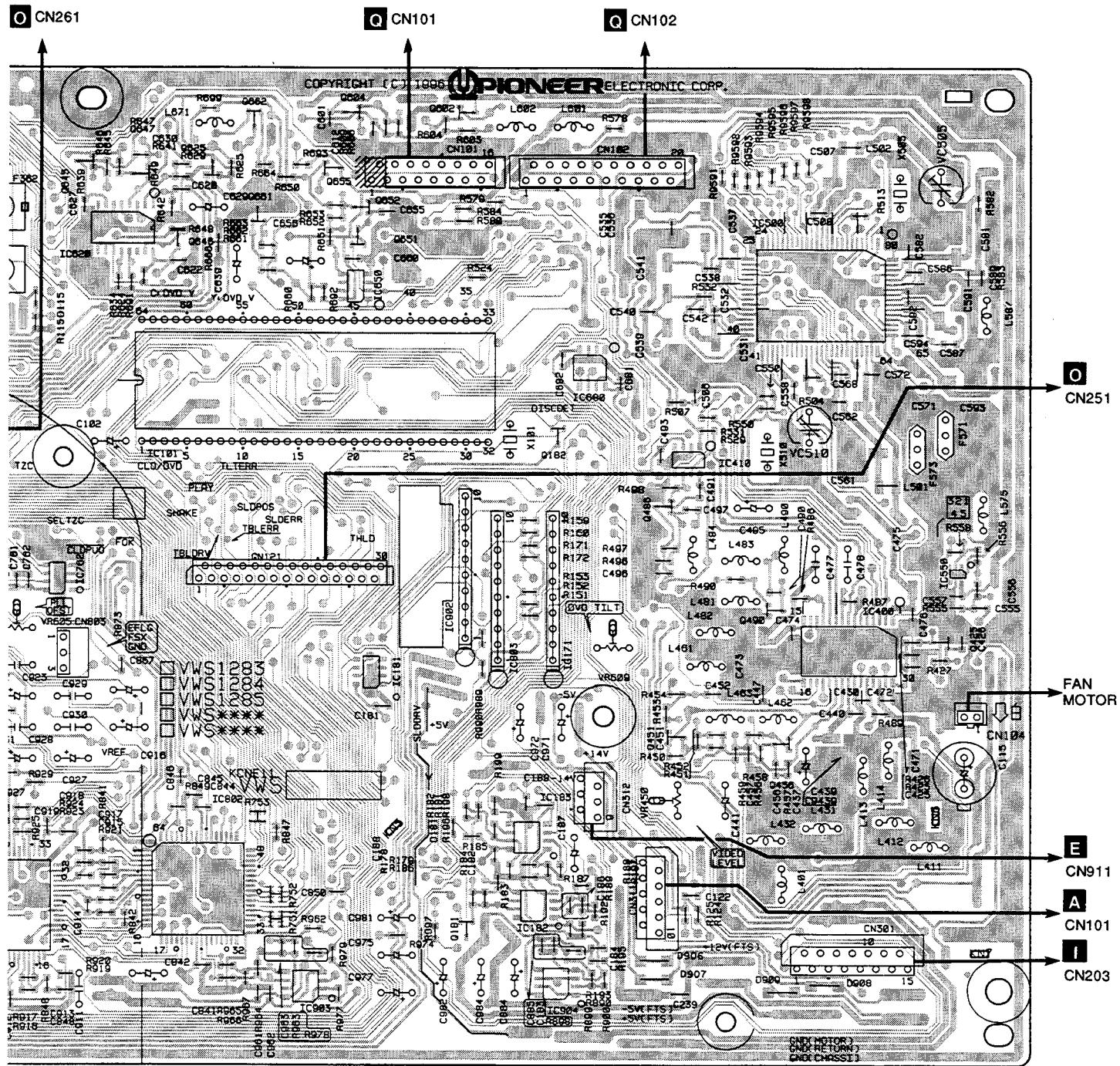


4.5 CLD MAIN AND JCKB ASSEMBLIES



	Q261	IC201	IC203	IC205	IC208	IC207	IC204	IC353	IC302	IC351	IC352	IC301	IC202	Q358	Q354	Q356	Q645	IC62
Q262	IC251		IC206				IC204	IC353					Q357	Q394	Q393	Q351		Q
IC321	IC223		Q834	IC221			IC801		IC302	IC351			Q391	IC905	IC761	IC762		
			Q141	IC222			Q811		IC322	IC352	IC301		Q392	IC906	IC907	IC901		
			Q143										Q910	Q909				

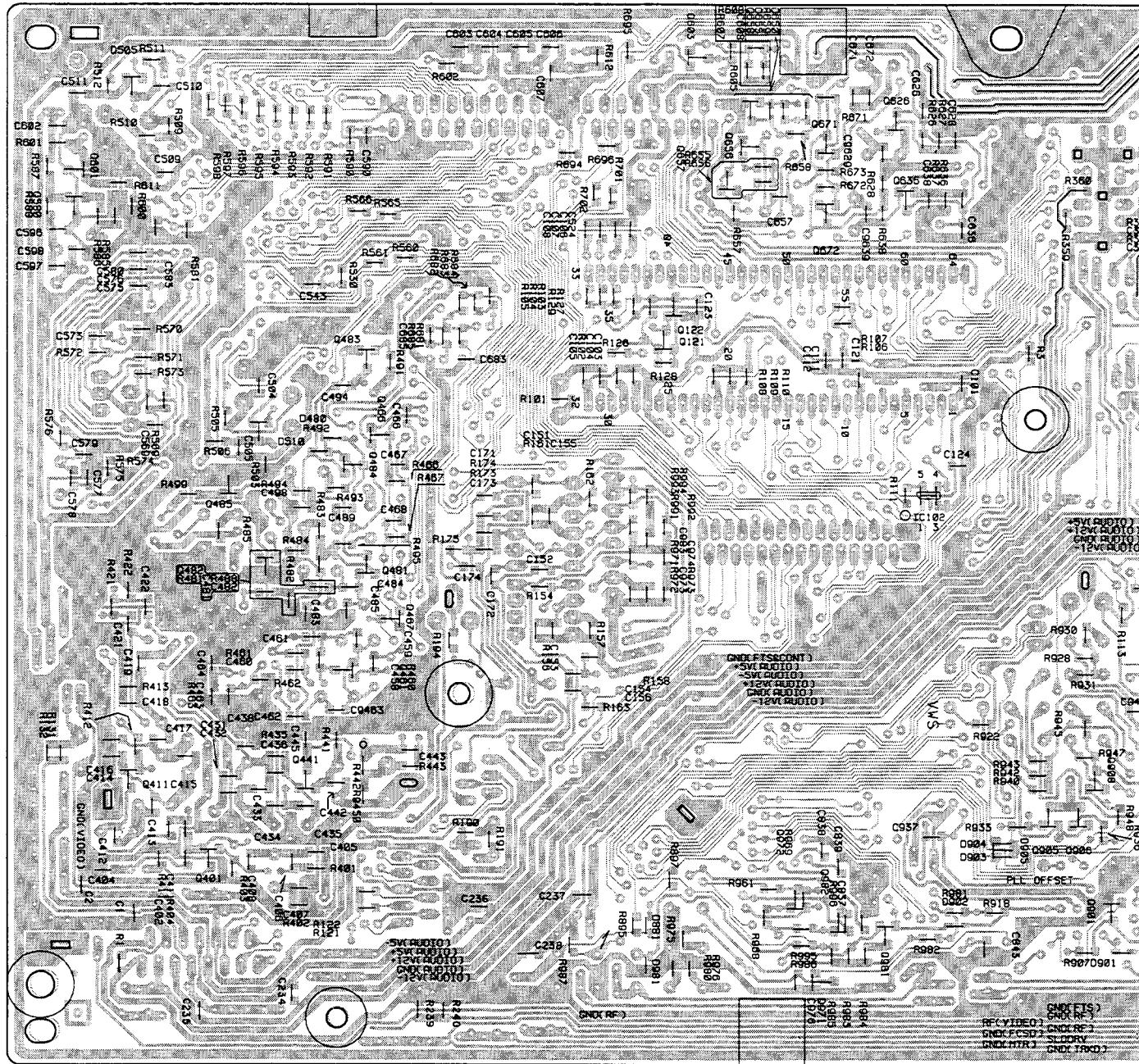
SIDE A



'R605		VR609		VR450		VC510		VC505	
Q645	IC620	Q625	Q662	Q604	Q651	Q602	IC183		
Q647	Q646	Q646	Q661	Q655	Q652		IC182	IC680	IC410
IC762	IC101	IC802	IC802	IC650	IC181	IC902	IC803	IC171	Q486
O1				IC903	IC181	Q181	Q182	Q451	Q451
							Q490	Q456	
									IC425

SIDE A

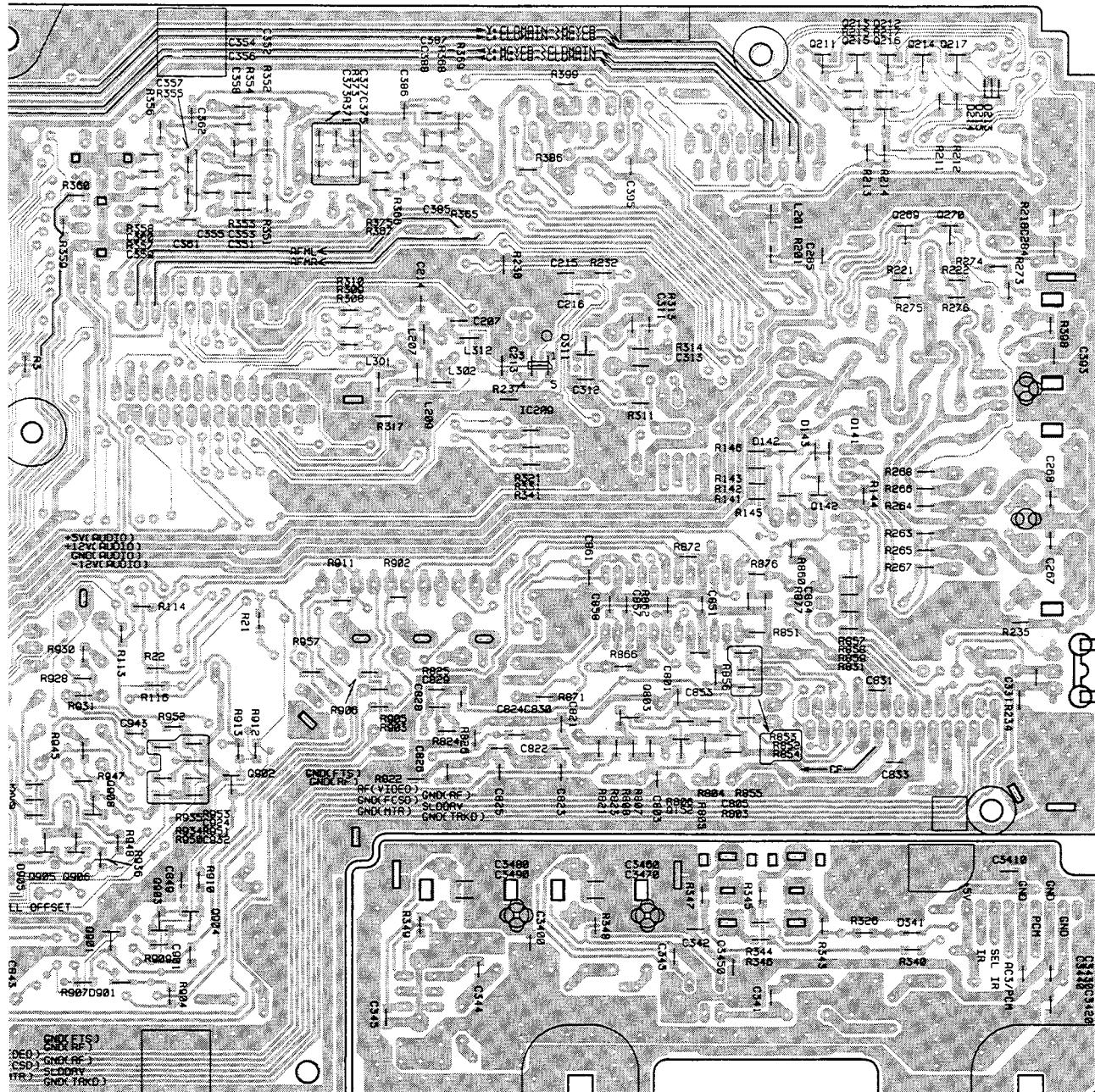
M CLD MAIN ASSY



Q580 Q461
Q601 Q482 Q485 Q441 Q483 Q466 Q467
Q411 Q401 Q484 Q481

Q603	Q656	Q671	Q626	IC102	
Q657	Q658	Q982	Q672	Q636	Q908
Q121	Q122	Q972	Q971	Q981	Q905 Q906 Q907

SIDE B



N
JCKB
ASSY

(VNP1605-D)

Q908
1905 Q906 Q901 Q903 Q904 Q902

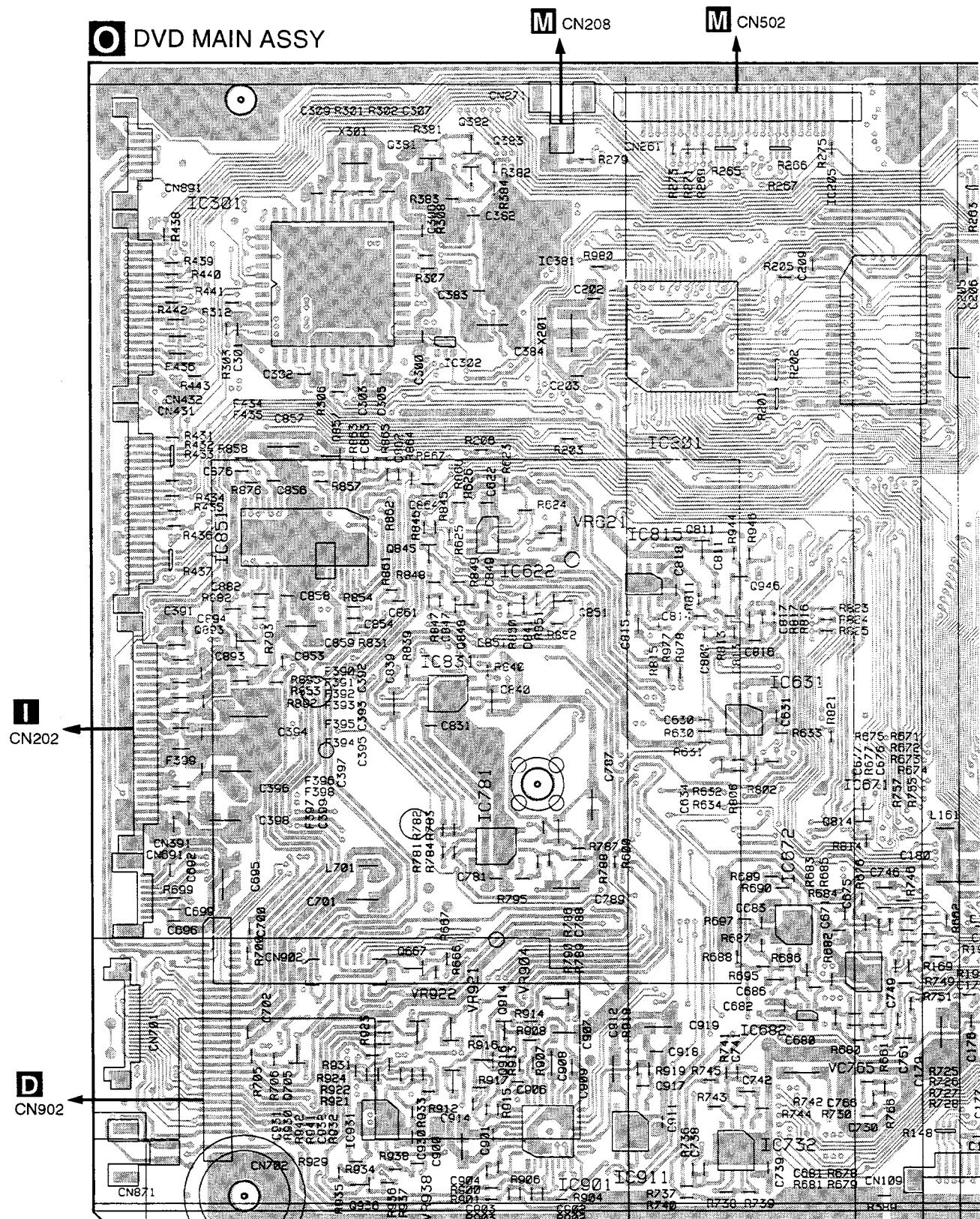
IC209 Q803 Q152

Q211 Q213 Q212
Q142 Q215 Q216 Q214 Q217
Q269 Q270

SIDE B

4.6 DVD MAIN ASSY

- This PCB is a four-layered board.
- Middle layer is mainly connected to Vcc and GND.



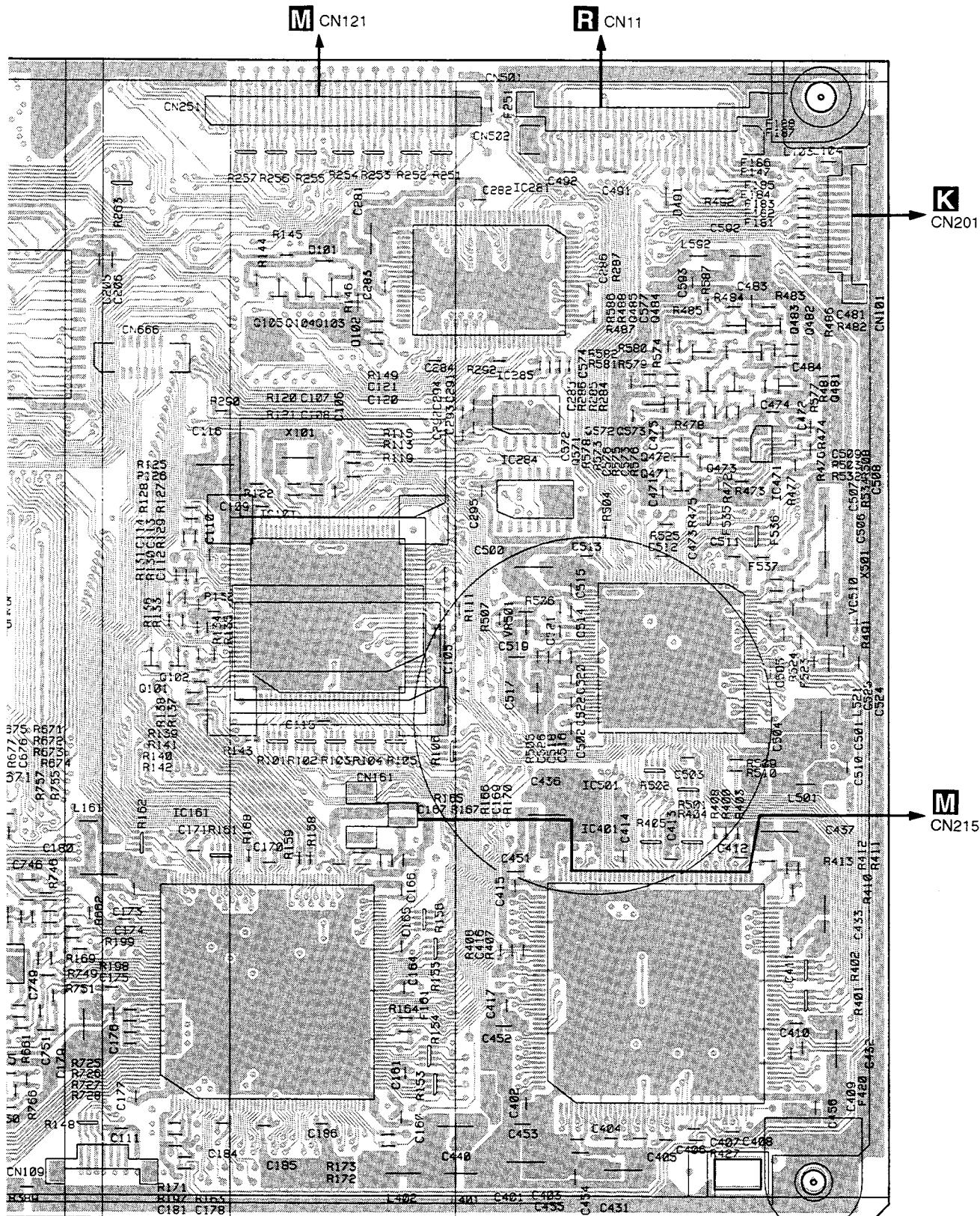
(VNP1550-C)

VR922 VR621
VR938 VR921 VR904

VC765

IC851 IC301 Q381 Q382 Q383 IC381
Q893 Q705 Q857 Q845 IC302 IC622 Q851
Q936 IC831 Q848 IC781
IC931 Q667 Q916 Q914 IC901

IC201 IC631 IC205
IC815 Q811 IC672 IC671
IC682 Q814
IC911 Q946 IC732



65

205

Q101 Q102

Q103-Q105
IC101
IC161

IC28
IC28

VR501

VC510
0481-0483

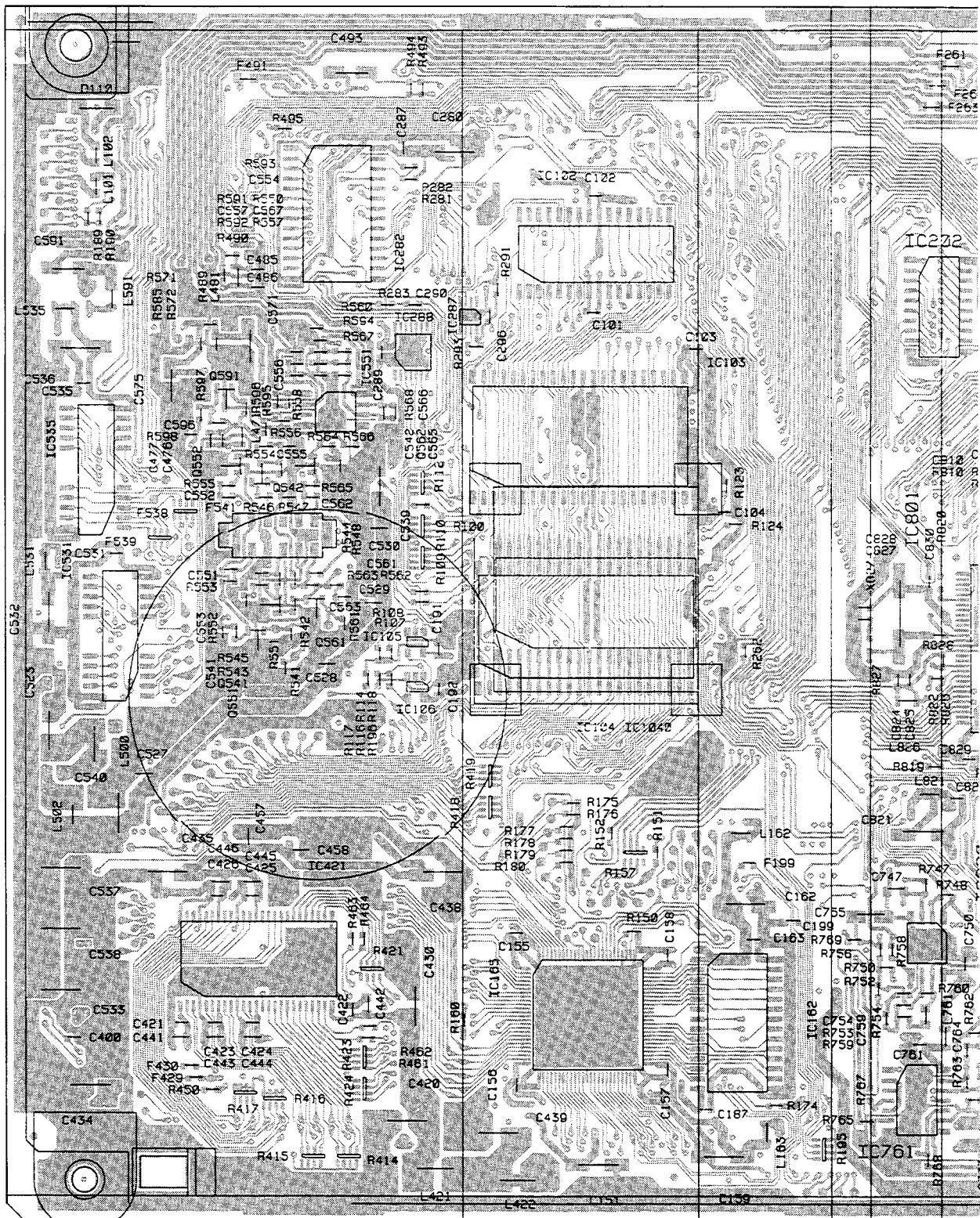
Q40
16471

Q471-Q473
IC401 IC501

SIDE A

O DVD MAIN ASSY

- This PCB is a four-layered board.
Middle layer is mainly connected to Vcc and GND.



(VNP1550-C)

IC535	Q591 Q542 Q562	IC282	IC288	IC102 - IC104
IC531	Q552 Q541 Q561	IC551	IC287	
	Q551	IC421	IC105	IC106
				IC165

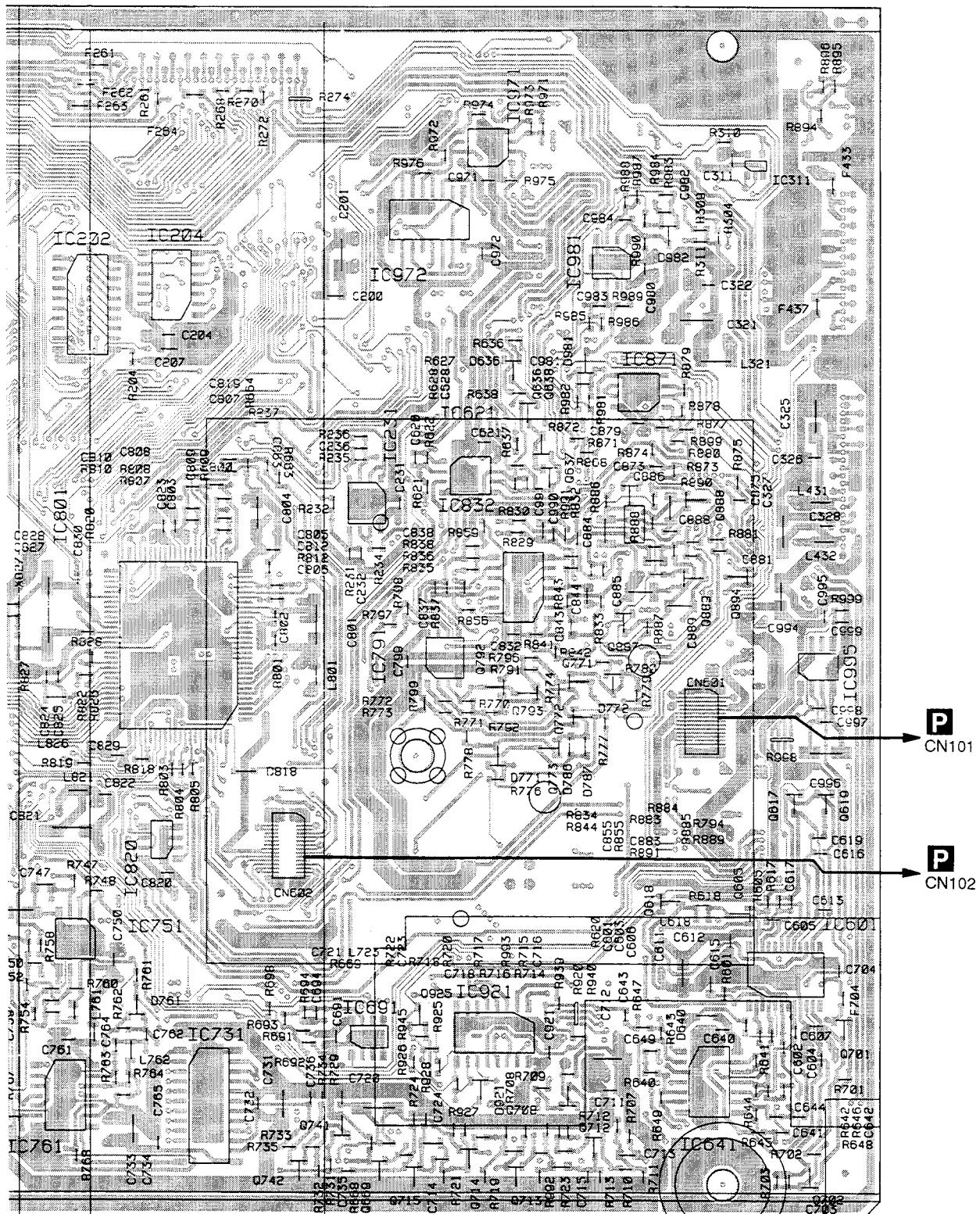
IC202
IC751
IC 761

IC102 – IC104

IC165

IC162

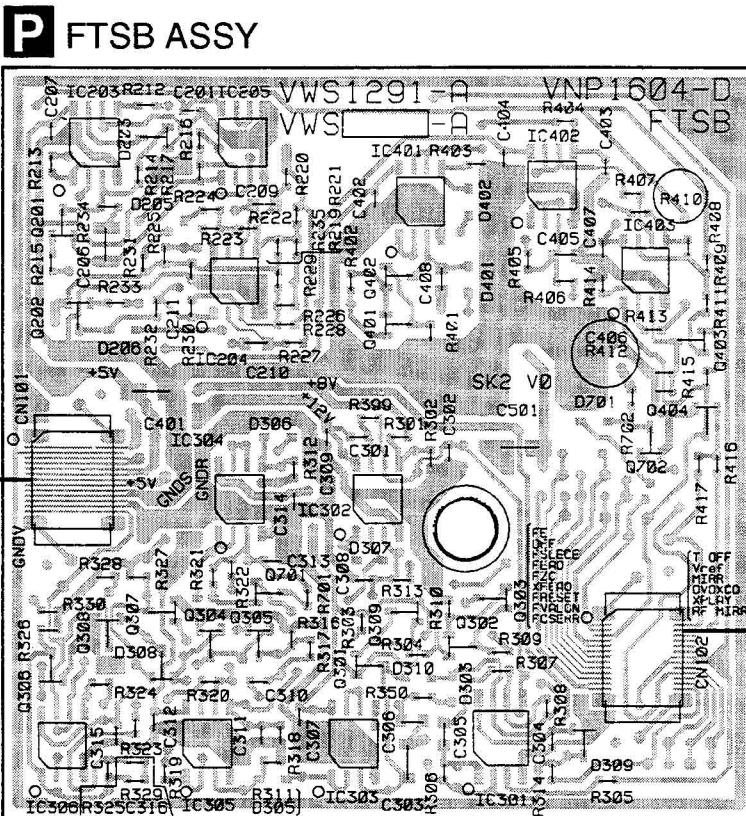
SIDE B



IC202	IC204	IC231	IC972	IC621	IC971	IC981	IC871	IC311	IC995
IC751	IC801		IC791	IC832	Q636-Q638	Q886-Q889	Q617		
IC761	IC820	IC731	IC691	Q925	Q792	Q793	Q771-Q773	Q894	Q701
			Q741	Q791	Q793	Q771-Q773		Q701	
				Q669	Q715	Q714	Q713	Q712	IC601
								IC641	Q702

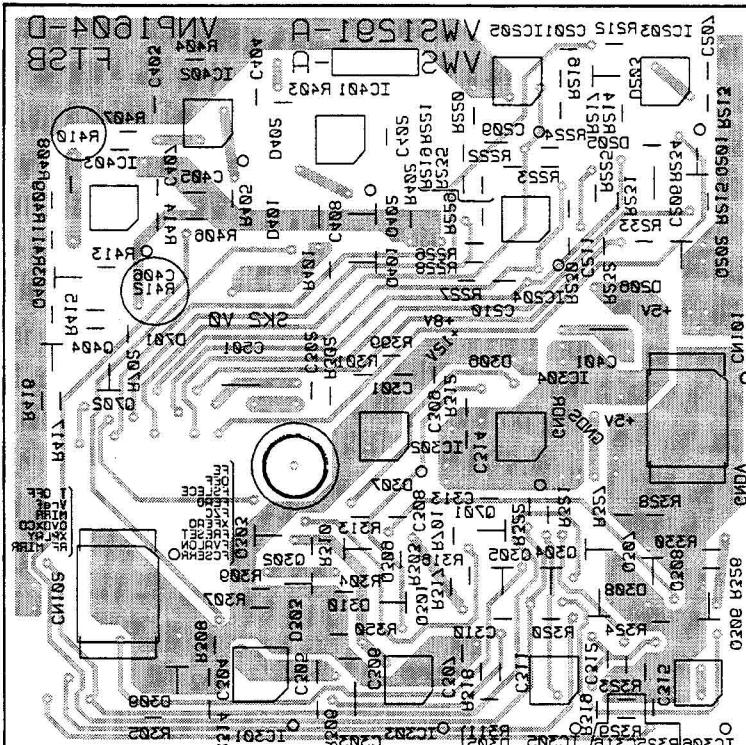
SIDE B

4.7 FTSB ASSY



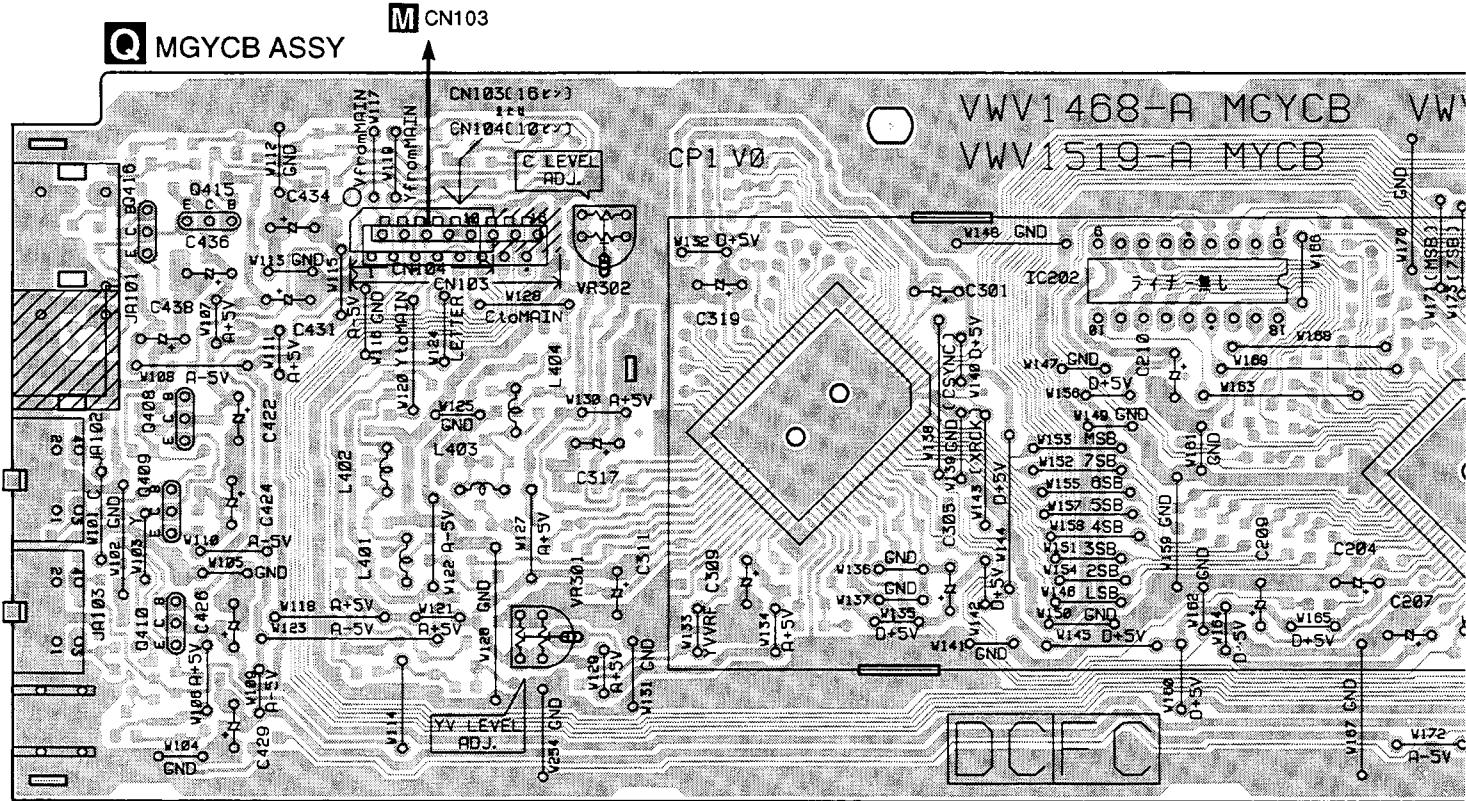
IC203 IC205 Q401 Q402 IC401 IC402 IC403
 Q201 IC305 IC204 Q305 Q309 Q302 Q303 Q404 Q403
 Q202 Q308 Q307 IC304 Q301 IC302
 IC306 Q304 Q305 IC303 IC301

SIDE A



SIDE B

4.8 MGYCB ASSY

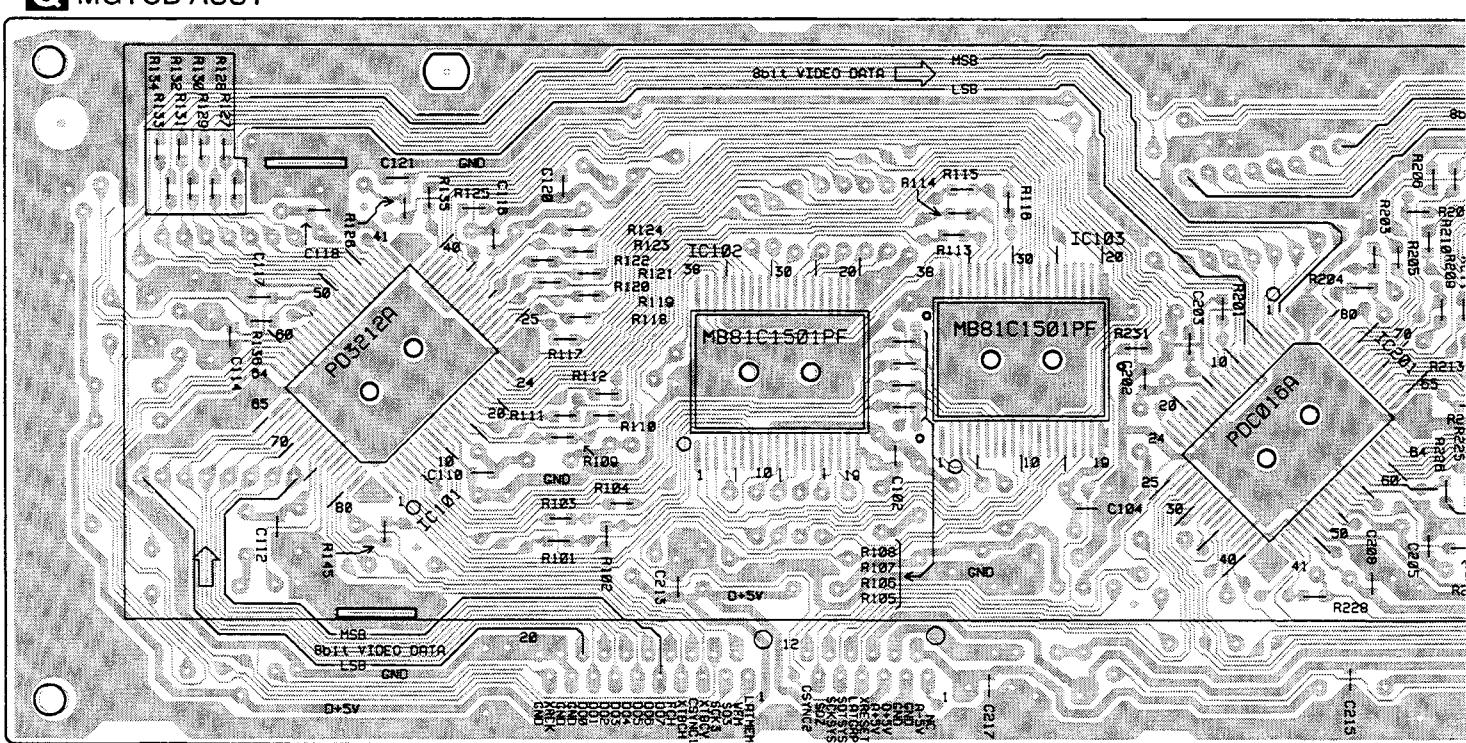


VR301 VR302

Q416 Q415
Q408-Q410

IC202

SIDE A



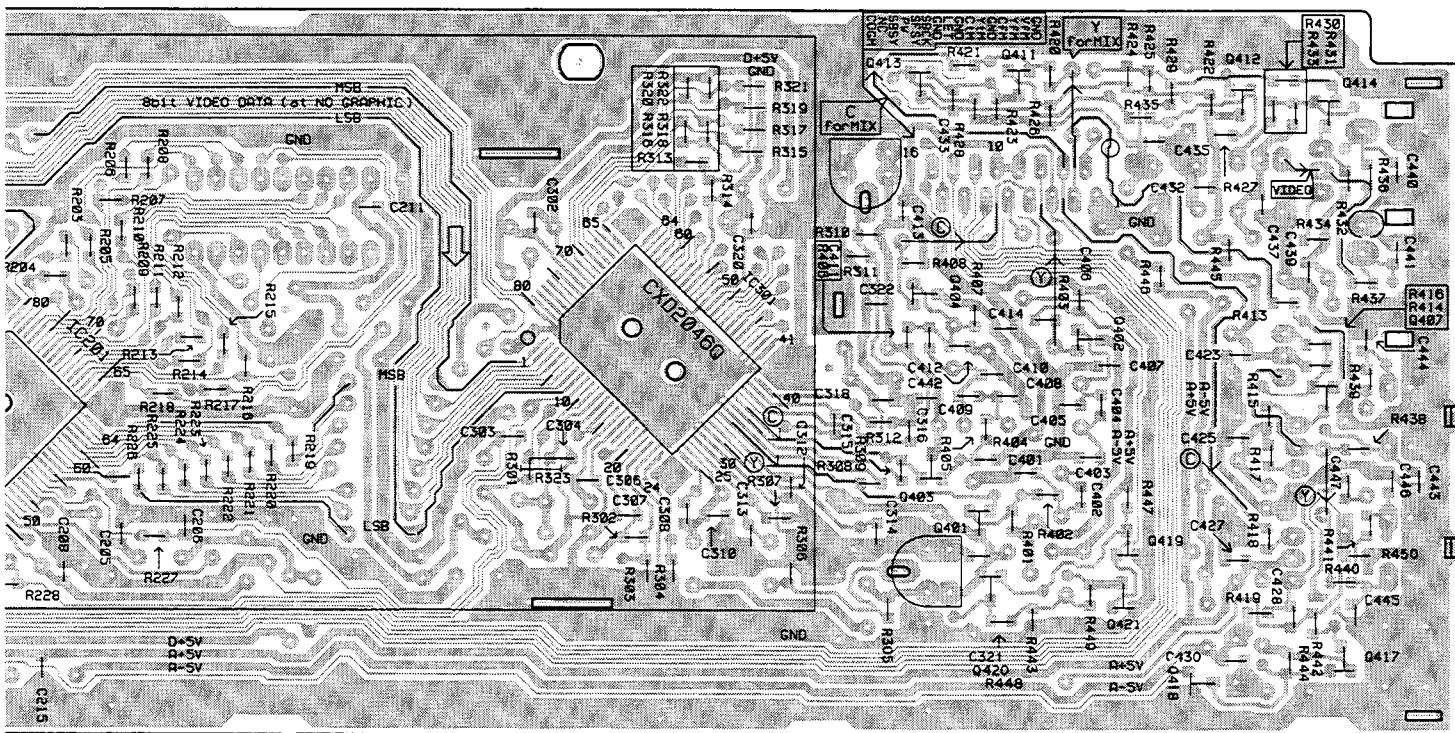
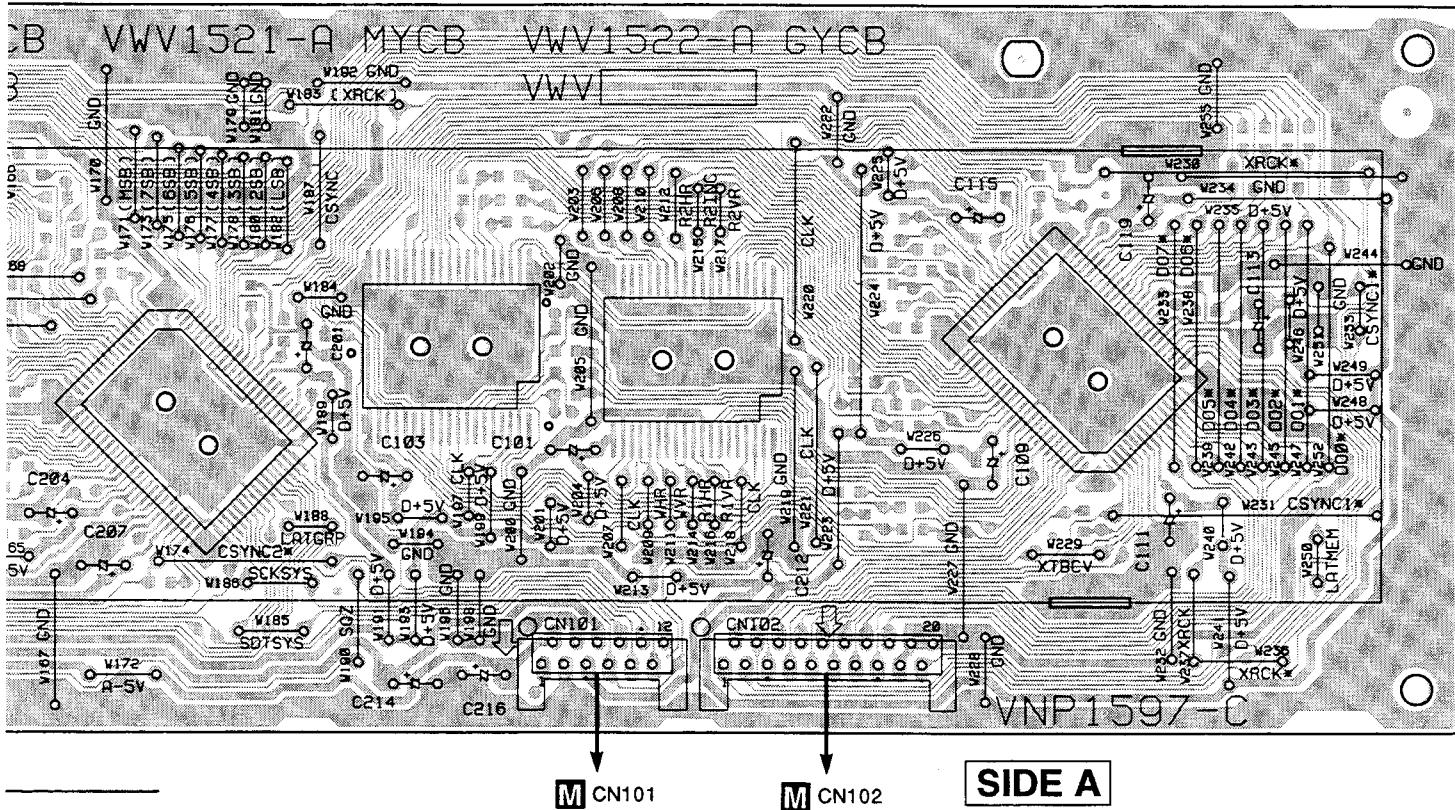
IC101

IC102

IC103

IG201

SIDE B

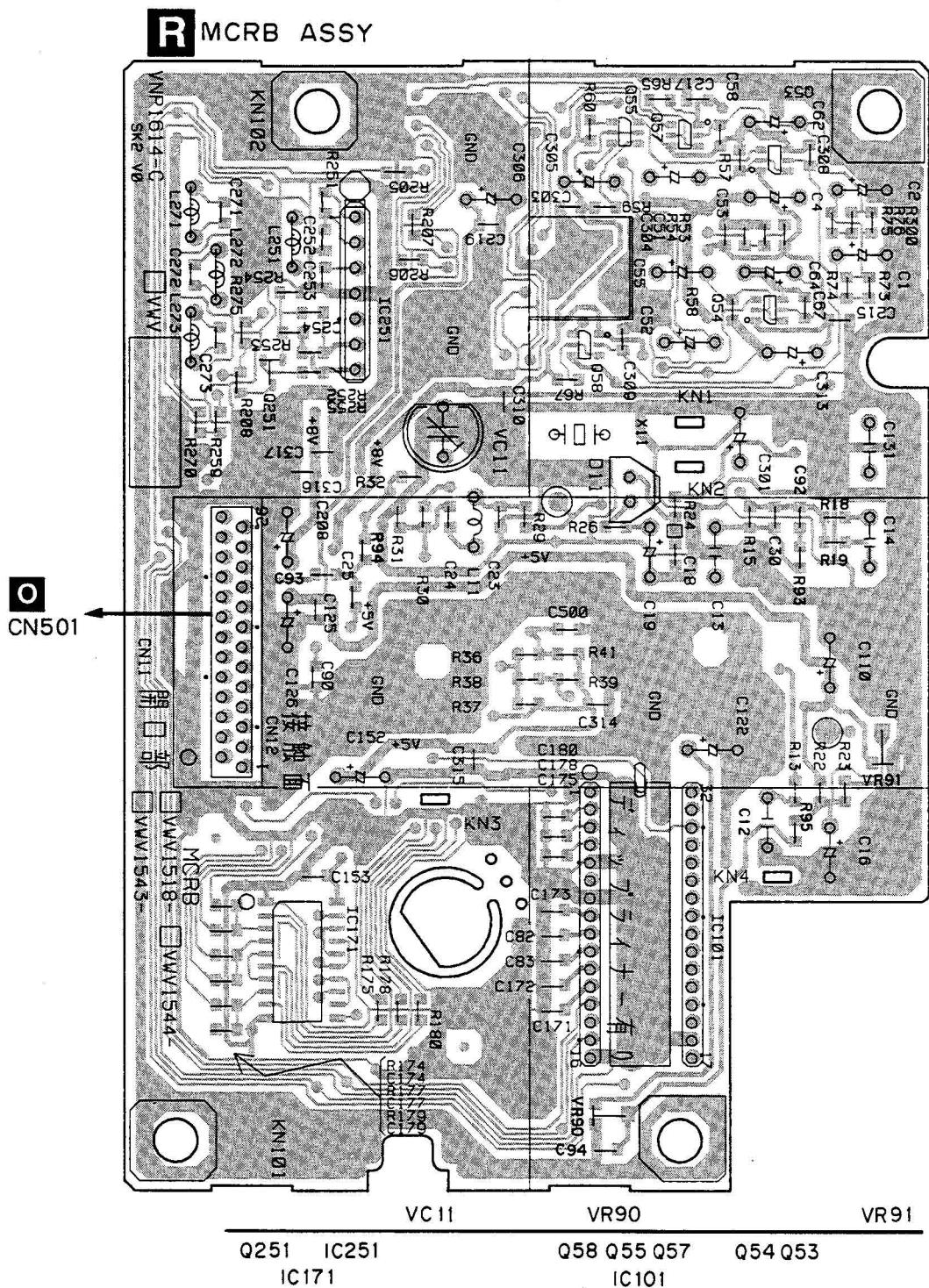


IC301

Q413 Q404 Q411 Q402 Q412 Q414 Q407
Q403 Q401 Q420 Q421 Q419 Q418 Q417

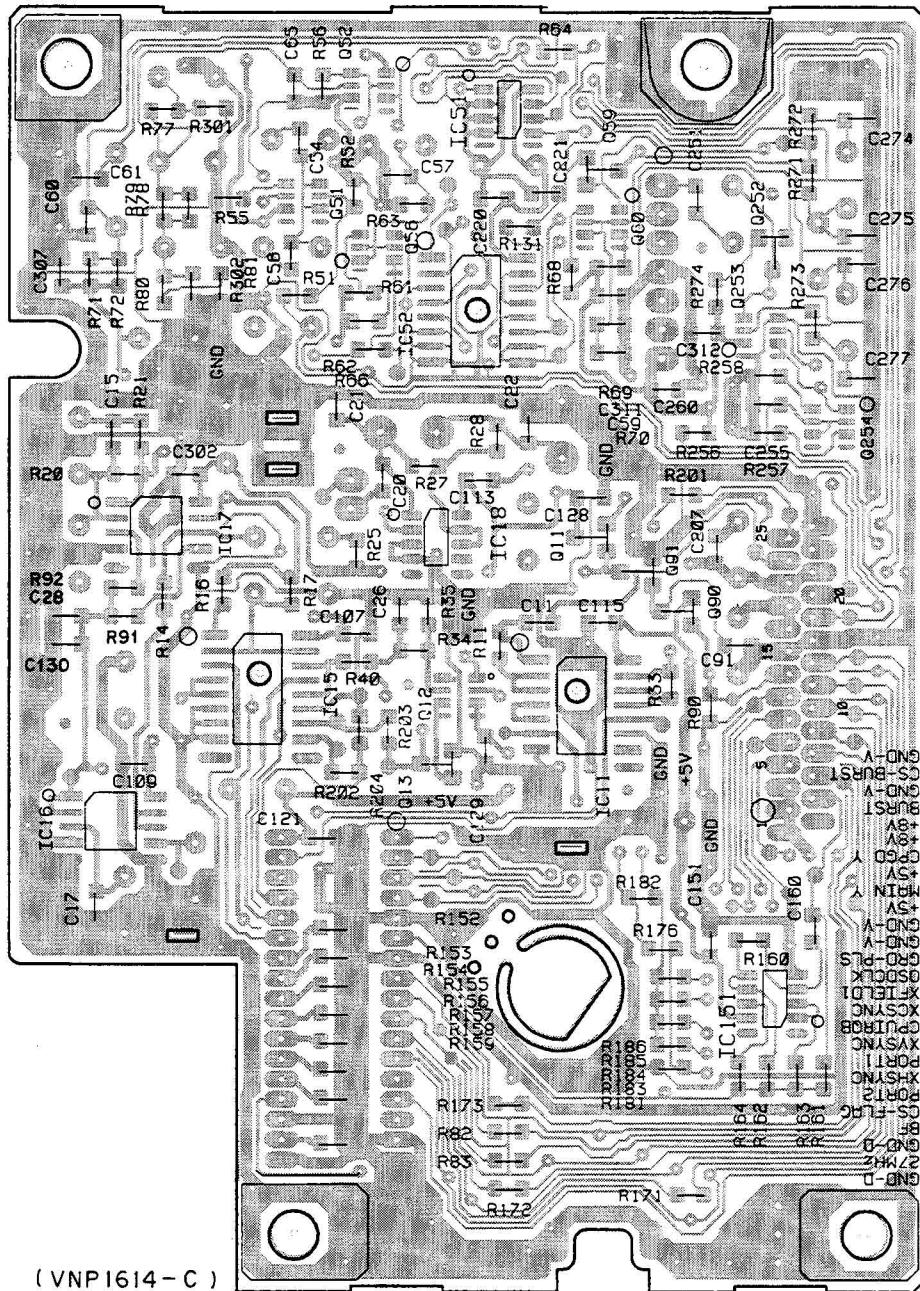
SIDE B

4.9 MCRB ASSY



SIDE A

R MCRB ASSY



IC16	IC17	Q51	Q52	Q56	IC51	Q59	Q60	Q252 - Q254
		IC15		IC18	IC52	Q11	Q91	Q90
			Q13	Q12		IC11		IC151

SIDE B

5. PCB PARTS LIST

NOTES: • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10³ → 561 RD1/4PU 5 6 1 J

47k Ω \rightarrow 47×10^3 \rightarrow 473 RD1/4PU 4 7 3 J
 0.5 Ω \rightarrow R50 RN2H R 5 0 K
 1 Ω \rightarrow 1R0 RS1P 1 R 0 K

there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10³ → 5621 RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
LIST OF ASSEMBLIES							
NSP	MACB ASSY		VWM1507			B PKSB ASSY	
NSP	- LMSB ASSY		VWG1554			SWITCHES	
NSP	- PKSB ASSY		VWG1555			S104, S105	DSG1017
NSP	- FG ASSY		VWG1556				
NSP	MECHB ASSY		VWM1721				
NSP	- CNNB ASSY		VWG1792				
NSP	- TNMB ASSY		VWG1793				
NSP	- DCSB ASSY		VWG1794				
NSP	- LCSB ASSY		VWG1795				
NSP	- B1SB ASSY		VWG1796				
△	POWER SUPPLY ASSY		VWR1274				
NSP	FLKB ASSY		VWM1760			MECHB ASSY	
	- FLPB ASSY		VWG1841			OTHERS	
	- KEYB ASSY		VWG1842			PC BOARD MECHB	GP1S24
	LEDB ASSY		VWG1832				
NSP	CLD MAIN ASSY		VWM1744				
	- CLD MAIN ASSY		VWS1284				
	- JCKB ASSY		VWV1532				
	DVD MAIN ASSY		VWS1312			D CNNB ASSY	
	FTSB ASSY		VWS1291			OTHERS	
	MGYCB ASSY		VWV1468			CN903 23P FFC CONNECTOR	52030-2310
	MCRB ASSY		VWV1544			CN901 26P FFC CONNECTOR	52030-2610
						CN905, CN906 KR CONNECTOR 2P	S2B-PH-K-S
						CN902 26P FFC CONNECTOR	SLW26R-1C7
						CN904 27P FFC CONNECTOR	SLW27R-1C7
MACB ASSY							
OTHERS							
	PC BOARD MACB		VNP1479			E TNMB ASSY	
						OTHERS	
						CN911 6P FFC CONNECTOR	52044-0645
						CN912 KR CONNECTOR 2P	B2B-PH-K-S
						CN913 KR CONNECTOR 3P	B3B-PH-K-S
A LMSB ASSY							
SWITCHES							
	S101-S103		DSG1017			F DCSB ASSY	
OTHERS							
	CN101 10P FFC CONNECTOR		52044-1045			SWITCH	
						S902	DSG1017
OTHERS							
						CN915 KR CONNECTOR 2P	S2B-PH-K-S

Mark	No.	Description	Part No.
G	LCSB ASSY		
SWITCH			
	S903		DSG1017
OTHERS			
	CN916	KR CONNECTOR 2P	S2B-PH-K-S
H	BISB ASSY		
SWITCH			
	S901		DSG1017
OTHERS			
	CN914	KR CONNECTOR 2P	S2B-PH-K-S
I	POWER SUPPLY ASSY		
SEMICONDUCTORS			
	IC201		AN1431T
	IC203		UPC358C
	IC204, IC205		VZF1047
	IC206		VZF1048
△	Q101, Q150, Q151		VZF1056
△	Q102		2SC3377
	Q201, Q202		T7F4T
	Q203, Q204		T7F4S
	Q205, Q206, Q252		2SC1740S
	Q207, Q208, Q214		2SA933S
	Q213		2SD2395
	Q251		2SD2007
△	D101		D2SB60F4004
	D202		VZF1051
	D204, D205		VZF1052
	D152, D240		VZF1054
	D252		VZF1055
	D106, D151		VZF1057
	D209-D212, D254		10ELS2
△	D104		1SS270A
	D208, D251		1SS270A
△	D153		VZF1045
△	D230-D232		VZF1045
△	D154		EG01C
△	D103		MTZJ2.7B
	D253		MTZJ2.7B
	D255		MTZJ8.2B
△	D200		PS2561L1-1VM
	D207		RD33FB2
	D206		S2LA20
	D203		S3L20U
OTHERS			
△	F101	FUSE (3.15A)	VEK1046
△	P201, P202	FUSE	VEK1047
△	P205, P211	FUSE (1A)	VEK1041
△	P209, P210	FUSE (1.25A)	VEK1045

Mark	No.	Description	Part No.
J	FLPB ASSY		
SEMICONDUCTORS			
	IC101		PD4753B
	IC102		S-806D
	Q102		DTA124ES
	Q101, Q103, Q104		DTC124ES
	D101, D105, D107, D108		SLR-342DUT31
	D102, D103, D106		SLR-342VCT31
	D104		SLR-342YCT31
SWITCHES			
	S101, S102		RSG1030
CAPACITORS			
	C105		CEJA470M6R3
	C103		CKPUYB102K50
	C102, C104, C107-C109, C111		CKPUYF103Z25
RESISTORS			
	All Resistors		RD1/4PU□□□J
OTHERS			
	CN102	FFC BOTTOM CONNECTOR 5P	52492-0520
		REMOTE RECEIVER UNIT	GPU28X
	V101	FL TUBE	VAW1042
		SPACER	VEC1599
	CN101	1.25 FJ CONNECTOR	VKN1375
		FL HOLDER	VNF1087
	X101	CERAMIC RESONATOR (5.00MHz)	VSS1104
K	KEYB ASSY		
SEMICONDUCTORS			
	Q201, Q202		DTC124ES
	D201, D202		SLR-342MCT31
SWITCHES			
	S201-S208		RSG1030
CAPACITORS			
	C202		CKPUYB102K50
	C201		CKPUYF103Z25
RESISTORS			
	All Resistors		RD1/4PU□□□J
OTHERS			
	CN203	5P FFC CONNECTOR	VKN1181
	CN201	13P FFC CONNECTOR	VKN1217
	CN202	1.25 FJ CONNECTOR	VKN1375
L	LEDB ASSY		
SEMICONDUCTORS			
	Q1-Q3		2PD601A
	Q4, Q5		UN2212
	D1-D3		CL-170SB-X
	D4-D7		PG1112H-430
	D8-D10		UDZ12B
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN1	5P FFC CONNECTOR	VKN1374

Mark	No.	Description	Part No.
M CLD MAIN ASSY			
SEMICONDUCTORS			
	IC761, IC904	BA10393F	
	IC223, IC251, IC680, IC903	BA4560F	
	IC905, IC906	BA4560F	
	IC352	CA0002AM	
	IC171, IC803	LA6510	
	IC400	LA7134M	
	IC901	LA9420M	
	IC801	LA9425	
	IC802	LC78681KE	
	IC353	M51131L	
△	IC182, IC183	MM6558XF	
	IC221	NJM78L08A	
	IC222	NJM79L08A	
	IC208	NJU6322KE	
	IC202	PD0236AM	
	IC101	PD0246A2	
	IC201	PD2029AM(L)	
	IC500	PD6159B	
	IC902	TA8410AK	
	IC181, IC762, IC907	TC4W53F	
	IC203, IC301	TC74HC157AF	
	IC302, IC620	TC74HC4053AF	
	IC206	TC7S00F	
	IC102	TC7S32F	
	IC205, IC209, IC550	TC7SU04F	
	IC650	TC7W00F	
	IC207	TC7WH74FU	
	IC204	TC7WU04F	
	Q121, Q182, Q482, Q580, Q645	2PB709A	
	Q672, Q906	2PB709A	
	Q269, Q270, Q391-Q393, Q401	2PD601A	
	Q441, Q481, Q625, Q626, Q636	2PD601A	
	Q646, Q647, Q655-Q658	2PD601A	
	Q661, Q662, Q671, Q803, Q811	2PD601A	
	Q902-Q905, Q908, Q909	2PD601A	
	Q834	2SA854S	
	Q152	2SC3802K	
	Q261, Q262	2SD2144S	
	Q211-Q214, Q217, Q394, Q651	DTA124EK	
	Q981	DTA124EK	
	Q122, Q181, Q215, Q216, Q652	DTC124EK	
	Q901, Q971	DTC124EK	
	Q910	FMY1A	
	D221	EC100S04	
	D311, D505	KV1851	
	D181, D650, D655, D821, D881	MA111	
	D901, D902, D981	MA111	
	D223, D224	MA152WA	
	D215, D905	MA152WK	
	D851	UDZ2.0B	
	D115	UDZ5.1B	
COILS AND FILTERS			
	L413	LAU100J	
	L401	LAU101J	
	L352, L821-L823	LAU181J	
	L251, L252, L311, L331, L351	LAU220J	
	L412, L461, L482, L831, L832	LAU220J	

Mark	No.	Description	Part No.
	L411, L587	LAU270J	
	L431, L432, L575	LAU430J	
	L671	LAU4R7J	
	L462	LAU560J	
	L414	LAU8R2J	
	L463	LFA561J	
	F223 FERRITE BEAD	VTF1094	
	F573 14.3MHz FILTER	VTF1095	
	L201, L209, L301, L302, L312	VTL1058	
	CHIP COIL (22 μ H)		
	L207 CHIP COIL (1.5 μ H)	VTL1059	
CAPACITORS			
	C417, C418, C421, C434, C543	CCSQCH100D50	
	C577, C845	CCSQCH100D50	
	C255, C256, C353, C655, C821	CCSQCH101J50	
	C837-C839, C843, C864, C865	CCSQCH101J50	
	C943	CCSQCH101J50	
	C432, C436, C483	CCSQCH120J50	
	C412	CCSQCH121J50	
	C408, C414, C484, C569	CCSQCH150J50	
	C355, C823, C901	CCSQCH151J50	
	C313, C352	CCSQCH180J50	
	C205, C509, C824, C973	CCSQCH220J50	
	C413, C555, C920, C921	CCSQCH221J50	
	C550	CCSQCH240J50	
	C354, C411, C416, C431, C830	CCSQCH270J50	
	C104, C105, C356, C433, C451	CCSQCH330J50	
	C579, C596	CCSQCH330J50	
	C351, C407, C485, C672	CCSQCH390J50	
	C671	CCSQCH391J50	
	C222, C257-C260, C405, C461	CCSQCH470J50	
	C229, C597	CCSQCH5R0C50	
	C358, C598, C806	CCSQCH680J50	
	C435, C822, C829	CCSQCH7R0D50	
	C357, C825	CCSQCH820J50	
	C459, C462	CCSQCH910J50	
	C230	CCSQCJ3R0C50	
	C656	CEAL100M16	
	C437	CEAL101M6R3	
	C927, C931	CEAL220M6R3	
	C936, C940	CEAL470M16	
	C316	CEAL470M6R3	
	C975	CEANP100M16	
	C263, C264, C629, C639	CEANP220M10	
	C187, C211, C441, C856	CEANP470M6R3	
	C221, C394, C397, C398, C884	CEAS100M50	
	C332, C391	CEAS101M10	
	C115	CEAS102M6R3	
	C269, C270, C867	CEAS1R0M50	
	C399, C971, C972, C981, C982	CEAS220M25	
	C863, C902, C934, C977	CEAS2R2M50	
	C102, C202, C204, C209	CEAS470M16	
	C223, C224, C261, C262, C302	CEAS470M16	
	C304, C317, C320, C382, C390	CEAS470M16	
	C396, C802, C804, C832, C834	CEAS470M16	
	C842, C852, C854, C859, C860	CEAS470M16	
	C253, C254	CEAS471M10	
	C862, C984	CEAS4R7M50	
	C383, C916, C922	CEASR47M50	
	C439	CEV100M16	
	C471, C473, C475, C507, C531	CEV101M6R3	
	C535, C537, C539, C541, C561	CEV101M6R3	

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	C571, C581, C591, C593	CEV101M6R3			OTHERS		
	C928	CFTXA104J50		CN312	6P FFC CONNECTOR	52045-0645	
	C477, C911, C929	CFTXA154J50		CN311	10P FFC CONNECTOR	52045-1045	
	C930	CFTXA473J50		CN301	15P FFC CONNECTOR	52045-1545	
	C478	CFTXA683J50		CN103	16P FFC CONNECTOR	52045-1645	
	C425, C910, C917, C918	CKSQYB102K50		CN802	11P TOP POST	B11P-SHF-1AA	
	C942	CKSQYB104K25		CN215	KR CONNECTOR 2P	B2B-PH-K-E	
	C925	CKSQYB332K50		CN104, CN208	KR CONNECTOR 2P	B2B-PH-K-S	
	C379, C380	CKSQYB392K50		CN803	3P TOP POST	B3P-SHF-1AA	
	C371-C376, C388, C912	CKSQYB472K50			SCREW	BBZ30P060FCC	
	C763	CKSQYB682K50		CN101	B TO B CONNECTOR 12P	BTFN12S-3SB7	
	C106-C112, C121, C124, C153	CKSQYF103Z50		CN102	B TO B CONNECTOR 20P	BTFN20S-3SB7	
	C155, C173, C181, C183, C184	CKSQYF103Z50		JA331	OPTICAL MODULE	GP1F32T	
	C188, C189, C201, C203	CKSQYF103Z50		JA251	PCB BINDER	VEF1040	
	C206-C208, C210, C213, C214	CKSQYF103Z50		JA252	4P PIN JACK	VKB1070	
	C231, C251, C252, C281-C283	CKSQYF103Z50		JA251	1P PIN JACK	VKB1074	
	C301, C303, C311, C312, C315	CKSQYF103Z50			64P IC SOCKET	VKH1004	
	C318, C319, C331, C361, C362	CKSQYF103Z50		CN502	26P FFC CONNECTOR	VKN1202	
	C381, C386, C389, C395, C422	CKSQYF103Z50		CN801	27P FFC CONNECTOR	VKN1203	
	C442, C510, C511, C558	CKSQYF103Z50		CN121	30P FFC CONNECTOR	VKN1206	
	C575, C576, C580, C583, C587	CKSQYF103Z50			SCREW TERMINAL	VNE1948	
	C761, C762, C801, C803, C811	CKSQYF103Z50		X101	CERAMIC RESONATOR (9MHz)	VSS1040	
	C827, C831, C833, C841, C846	CKSQYF103Z50		X311	CRYSTAL RESONATOR (16MHz)	VSS1081	
	C851, C853, C861, C881-C883	CKSQYF103Z50		X312	CHIP CRYSTAL (36.86MHz)	VSS1085	
	C885, C924, C935, C937, C939	CKSQYF103Z50		X505	CRYSTAL RESONATOR (14MHz)	VSS1103	
	C945, C946, C961, C962, C974	CKSQYF103Z50					
	C983	CKSQYF103Z50					
	C101, C103, C122, C151, C152	CKSQYF104Z25					
	C171, C172, C182, C227, C228	CKSQYF104Z25					
	C267, C268, C385, C387, C392	CKSQYF104Z25					
	C402, C404, C419, C430, C438	CKSQYF104Z25					
	C440, C445, C447, C472, C474	CKSQYF104Z25					
	C476, C508, C524, C532, C536	CKSQYF104Z25					
	C538, C540, C542, C556, C557	CKSQYF104Z25					
	C562, C572, C582, C586, C589	CKSQYF104Z25					
	C592, C594, C620, C622	CKSQYF104Z25					
	C626-C628, C630, C636, C638	CKSQYF104Z25					
	C660, C681-C683, C764, C805	CKSQYF104Z25					
	C857, C858, C866, C886	CKSQYF104Z25					
	C913-C915, C919, C963, C976	CKSQYF104Z25					
	C186, C685, C855, C926, C938	CKSQYF223Z50					
	C377, C378, C393, C908, C909	CKSQYF224Z25					
	C154, C156, C174, C460, C826	CKSQYF473Z50					
	C828, C932, C933	CKSQYF473Z50					
	C923	CQMA103J50					
	C903	CQMA222J50					
	C265, C266	CQMA332J50					
	C941	CQMA681J50					
RESISTORS							
	R753	RA4C221J					
	R203, R751, R752	RA4C471J					
	R425, R833, R834, R837, R839	RN1/10SE1002D					
	R891, R892	RN1/10SE1002D					
	R152, R156	RN1/10SE1003D					
	R532	RN1/10SE1100D					
	R531	RN1/10SE1800D					
	R151, R893, R894	RN1/10SE3302D					
	R153, R154, R259-R262	RN1/10SE4702D					
	VR450 (2.2kΩ)	PCP1025					
	VR603 (4.7kΩ)	PCP1028					
	VR604, VR605, VR607, VR609 (47kΩ)	PCP1031					
	Other Resistors	RS1/10S□□□J					

N JCKB ASSY

SEMICONDUCTORS

IC321, IC322
D341

TC74HCU04AF
MA111

COILS

L322, L326
L321, L324
L323, L325

LAU1R0J
LAU220J
PTL1003

CAPACITORS

C322, C324, C326, C328
C323, C327, C341-C345
C3460, C3480

CEAL470M16
CKSQYF103Z50
CKSQYF104Z25

RESISTORS

All Resistors

RS1/10S□□□J

OTHERS

JA321, JA322 REMOTE CONTROL JACK RKN1004
JA324 1P PIN JACK
JA323 1P PIN JACK
SCREW TERMINAL

VKB1074
VKB1097
VNE1948

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.				
		DVD MAIN ASSY									
SEMICONDUCTORS											
	IC631, IC981	BA10393F			Q101, Q102, Q105	DTC114TK					
	IC851	BA6797FP			Q886, Q887, Q894	DTC124EK					
	IC901	CXA2521AQ			D786, D787, D818	1SS355					
	IC801	CXD2545Q			D771, D921, D981, D982	DAN202K					
	IC101	HD6417032F20			D110	EC100S04					
	IC162	HM514800CJ-7			D761	KV1410					
	IC282	HM62256BLFP-8T			D101	RB501V-40					
	IC995	IR3C07N			D640	UDZ2.0B					
	IC281	LC98000K-V26A		COILS AND FILTERS							
	IC531, IC535	MB81C4256A-70PJ		L321	CHIP SOLID INDUCTOR	ATL7001					
	IC551	MC14577CF		L101-L104	CHIP INPEDER	DTL1028					
	IC231, IC621, IC781, IC931	NJM2100M		F541	DVD VIDEO FILTER	VTF1072					
	IC671, IC672, IC732, IC791, IC971	NJM2904M		F535, F536, F538, F539	FERRITE BEAD	VTF1073					
	IC831, IC911	NJM4580M		F537	FERRITE BEAD	VTF1074					
	IC601	PA0065AM									
	IC2050	PD5415F		F1491	FERRITE BEAD	VTF1075					
	IC161	PD4695A		F420, F523	FERRITE BEAD	VTF1076					
	IC501	PD4696A		F199	FERRITE BEAD	VTF1077					
	IC201	PD4784A		F704	CHIP SOLID INDUCTOR	VTF1078					
	IC165	PD4795B		F390-F399	FERRITE BEAD	VTF1079					
	IC1030	PD6226A									
	IC104	PKD022A		F147, F181-F188	FERRITE BEAD	VTF1080					
	IC381	TA78M08F		L431, L432, L471, L591, L701		VTL1058					
△	IC471, IC815, IC820	TC4W53F			CHIP COIL (22μH)						
	IC102	TC558128AJ-20		L761, L801	CHIP COIL (22μH)	VTL1058					
	IC284	TC74HC139AF		L762	CHIP COIL (1.5μH)	VTL1059					
	IC285	TC74HC14AF									
	IC204	TC74HC20AF		L501, L592	CHIP COIL (0.15μH)	VTL1060					
	IC972	TC74HC4052AF		L502, L723	CHIP COIL (10μH)	VTL1061					
	IC921	TC74HC4053AF		L421	CHIP COIL (47μH)	VTL1063					
	IC832	TC74HC4066AF		CAPACITORS							
	IC202	TC74HC573AF		C509		CCSRCH100D50					
	IC641, IC761	TC74HCU04AF		C800		CCSRCH101J50					
	IC288	TC74VHC08FS		C601-C604, C606, C904		CCSRCH121J50					
	IC302	TC7S04F		C902, C903		CCSRCH151J50					
	IC105	TC7SH02F		C723		CCSRCH180J50					
	IC106	TC7SH32F									
	IC311	TC7ST08F		C620		CCSRCH181J50					
	IC287	TC7W125FU		C765		CCSRCH220J50					
	IC751	TLC272CP		C716, C810, C917		CCSRCH221J50					
	IC731	TLC5540INS		C508, C618		CCSRCH270J50					
	IC421	UPD4516161G5-A12-7JF		C914		CCSRCH390J50					
	IC401	UPD61021									
	IC205	VKH1011		C862-C864		CCSRCH391J50					
	IC301	ZR38521		C730, C814		CCSRCH470J50					
	Q473, Q481-Q485, Q551, Q552	2PB709A		C616, C681		CCSRCH471J50					
	Q561, Q562, Q591, Q667, Q702	2PB709A		C724		CCSRCH560J50					
	Q705, Q708, Q741, Q792, Q814	2PB709A		C556, C566, C714		CCSRCH5R0C50					
	Q848, Q857, Q893	2PB709A									
	Q382, Q383, Q471, Q472	2PD601A		C634, C806, C854, C855		CCSRCH680J50					
	Q571-Q573, Q605, Q669, Q701	2PD601A		C107, C108		CCSRCH7R0D50					
	Q742, Q771, Q773, Q793, Q845	2PD601A		C813		CCSRCH820J50					
	Q851, Q914, Q916, Q925, Q936	2PD601A		C476		CCSRCH910J50					
	Q946	2PD601A		C116, C151, C159, C162, C180		CEV101M6R3					
	Q381	2SB1260									
	Q712-Q715	2SC3802K		C280, C401, C420, C430-C440		CEV101M6R3					
	Q103	DTA114EK		C500, C501, C523, C532, C533		CEV101M6R3					
	Q104, Q617, Q618, Q772, Q811	DTC114EK		C536-C540, C801, C821		CEV101M6R3					
				C755		CEV1R0M50					
				C325, C384, C571, C592, C857		CEV220M16					
				C859		CEV220M16					
				C611, C712, C731, C733, C900		CEV220M6R3					
				C912, C919, C994		CEV220M6R3					
				C179, C201, C281, C321, C327		CEV470M6R3					
				C396, C493, C517, C591, C701		CEV470M6R3					
				C804, C996		CEV470M6R3					
				C720, C787		CEVNP100M16					
				C789		CEVNP2R2M35					
				C908		CFHS333J16					
				C788, C839, C840		CFHS473J16					

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
C884, C885, C907		CFHSP104J16		R401, R402, R404, R405, R421		RA4C220J	
C686, C909		CFHSQ103J16		R423, R424, R501, R502		RA4C220J	
C882, C883		CFHSQ272J50		R998		RA4C390J	
C677		CFHSQ822J16		R2510, R2620, R2630, R2640, R4910		RS1/10S0R0J	
C843, C844, C894		CKSQYB104K25		R723		RS1/10S0R0J	
C615, C680, C713, C718, C742		CKSQYB105K10		R892		RS1/10S1R2J	
C746, C747, C751, C811		CKSQYB105K10		R573		RS1/16S1001F	
C815, C817		CKSQYB224K16		R862, R863, R866, R867		RS1/16S1002F	
C759, C893		CKSQYB474K16		R149, R166, R477, R693		RS1/16S1003F	
C206, C207, C441-C446, C519		CKSQYF225Z16		R762, R763, R766, R786, R790		RS1/16S1003F	
C527-C530		CKSQYF225Z16		R814, R817, R846, R873, R876		RS1/16S1003F	
C749, C766		CKSRYB102K50		R999		RS1/16S1003F	
C101, C121, C169, C178, C290		CKSRYB103K50		R383, R864, R865		RS1/16S1202F	
C471, C472, C574, C605, C617		CKSRYB103K50		R781, R782, R788, R900-R903		RS1/16S1502F	
C676, C700, C711, C762, C764		CKSRYB103K50		R580, R582, R783, R784		RS1/16S2202F	
C816, C830, C832, C837, C838		CKSRYB103K50					
C853, C861, C881, C906		CKSRYB103K50		R835-R840, R871, R872, R893		RS1/16S2202F	
C997-C999		CKSRYB103K50		R914, R916, R936, R946		RS1/16S2202F	
C983, C984		CKSRYB104K16		R232, R236, R793, R794		RS1/16S2203F	
C809		CKSRYB152K50		R884, R885, R989, R990		RS1/16S2203F	
C692		CKSRYB153K50		R712, R720, R857		RS1/16S3901F	
C641-C644, C649, C819		CKSRYB222K50					
C931, C932		CKSRYB222K50		R798, R800, R829, R830		RS1/16S4702F	
C847		CKSRYB333K16		R843, R844, R854, R855, R925		RS1/16S4702F	
C741		CKSRYB472K50		R927, R928, R945		RS1/16S4702F	
C735, C808		CKSRYB473K16		R778, R833, R834		RS1/16S4703F	
C102-C106, C109-C115, C120		CKSRYF104Z16		R575, R741, R742		RS1/16S5601F	
C155-C158, C160, C161		CKSRYF104Z16					
C163-C167, C170, C171		CKSRYF104Z16		R831, R832		RS1/16S5602F	
C173-C177, C181, C184-C187		CKSRYF104Z16		R874, R877		RS1/16S6802F	
C191, C192, C202-C205, C209		CKSRYF104Z16		R882, R883		RS1/16S8202F	
C231, C282-C287, C289, C291		CKSRYF104Z16		R4010		VCN1058	
C295, C296, C300-C303		CKSRYF104Z16		VR501	(4.7kΩ)	VCP1090	
C305-C307, C309, C311, C322		CKSRYF104Z16					
C326, C328, C382, C383		CKSRYF104Z16		VR904, VR921 (10kΩ)		VCP1092	
C391-C393, C395, C397, C399		CKSRYF104Z16		VR621, VR938 (22kΩ)		VCP1094	
C402-C417, C421-C426		CKSRYF104Z16		VR922 (10kΩ)		VCP1131	
C473-C475, C481, C483, C484		CKSRYF104Z16		Other Resistors		RS1/16S□□□J	
C491, C492, C502-C507		CKSRYF104Z16					
C510-C516, C518, C520-C522		CKSRYF104Z16					
C526, C531, C535, C553-C555		CKSRYF104Z16					
C563, C565, C572, C573, C577		CKSRYF104Z16					
C596, C607, C612, C613, C621		CKSRYF104Z16					
C630, C631, C640, C671, C675		CKSRYF104Z16					
C683, C702-C704, C721, C732		CKSRYF104Z16					
C734, C738, C739, C750, C761		CKSRYF104Z16					
C781, C799, C802, C803, C805		CKSRYF104Z16					
C812, C818, C820, C822, C823		CKSRYF104Z16					
C829, C831, C858, C901, C911		CKSRYF104Z16					
C918, C921, C930, C971, C972		CKSRYF104Z16					
C980-C982, C995		CKSRYF104Z16					
VC510 (20pF)		VCM1008					
VC765 (40pF)		VCM1010					

RESISTORS

R109, R110, R112, R195	RA4C103J
R414–R419, R920	RA4C103J
R101–R106, R148, R153–R157	RA4C220J
R161, R162, R201, R202	RA4C220J
R251–R257, R265, R266, R274	RA4C220J

Mark	No.	Description	Part No.
P FTSB ASSY			
SEMICONDUCTORS			
	IC204, IC306, IC403	BA10393F	
	IC301	MC14577CF	
	IC302, IC303, IC305, IC401	NJM072BM	
	IC205	NJM2100M	
	IC304, IC402	NJM4580M	
	Q301, Q309, Q401-Q403	2PB709A	
	Q302, Q303, Q305, Q404	2PD601A	
	Q304, Q308	DTC114EK	
	D205, D206, D303, D305-D307	1SS355	
	D310, D401, D402	1SS355	
	D308	DAN202K	
CAPACITORS			
	C316	CCSRCH101J50	
	C401, C501	CEV100M16	
	C303	CFHS473J16	
	C306, C408	CFHS0471J50	
	C209, C210, C305	CKS0YB105K10	
	C308, C403, C406	CKSRYB102K50	
	C311	CKSRYB472K50	
	C313	CKSRYB473K16	
	C201, C211, C302, C304, C307	CKSRYF104Z16	
	C309, C312, C314, C315, C402	CKSRYF104Z16	
	C404, C407	CKSRYF104Z16	
	C310	CCSRCH101J50	
	C405	CKS0YB224K16	
RESISTORS			
	R322	RS1/16S1001F	
	R405	RS1/16S1801F	
	R406	RS1/16S3601F	
	R321	RS1/16S6801F	
	Other Resistors	RS1/16S□□□J	
OTHERS			
	CN101, CN102 B TO B CONNECTOR 30P	VKN1294	

Mark	No.	Description	Part No.
	C301, C305, C309, C311, C317	CEAS101M10	
	C319, C422, C424, C426, C429	CEAS101M10	
	C431, C434, C436, C438	CEAS101M10	
	C303	CKS0YB102K50	
	C102, C104, C110, C112, C114	CKS0YF104Z25	
	C116-C118, C202, C203, C205	CKS0YF104Z25	
	C208, C211, C213, C215, C217	CKS0YF104Z25	
	C302, C304, C306-C308, C310	CKS0YF104Z25	
	C312-C316, C318, C320-C322	CKS0YF104Z25	
	C406, C407, C413, C414, C423	CKS0YF104Z25	
	C425, C427, C428, C430, C432	CKS0YF104Z25	
	C435, C437, C439, C442, C447	CKS0YF104Z25	
RESISTORS			
	R424	RN1/10SE1801D	
	R422	RN1/10SE2201D	
	R309	RN1/10SE2700D	
	R425	RN1/10SE2702D	
	R310, R420, R421	RN1/10SE3301D	
	R312, R426	RN1/10SE4701D	
	R311	RN1/10SE5601D	
	VR301 (22KΩ)	PCP1030	
	Other Resistors	RS1/10S□□□J	
OTHERS			
	CN103	16P FFC CONNECTOR	52045-1645
		2P PIN JACK	AKB7076
	CN101	B TO B CONNECTOR 12P	BTFN12P-3RD7
	CN102	B TO B CONNECTOR 20P	BTFN20P-3RD7
		4P MINI DIN SOCKET	VKN1078
		SCREW TERMINAL	VNE1948
		SHIELD CASE A	VNF1098
		SHIELD CASE C	VNF1100

Mark	No.	Description	Part No.
R MCRB ASSY			
SEMICONDUCTORS			
	IC16, IC17	NJM2100M	
	IC101	PD9014A	
	IC51	TC4W53F	
	IC15, IC52	TC74HC4053AF	
	IC11	TC74HCU04AF	
	IC171	TC74VHCT374F	
	IC18	TC7WU04F	
	0252, 059	2PB709A	
	Q11	2PD601A	
	Q13	DTC124EK	
	055, 056, 060	IMT1A	
	0254, 051	IMX1	
	012, 0253, 052-054	IMZ1A	
	057, 058	IMZ1A	
	D11	SVC201SPA	

Mark	No.	Description	Part No.
COILS			
	L271	LAU270J	
	L272	LAU390J	
	L273	LAU430J	
	L11	LFA220J	
CAPACITORS			
	C274, C30	CCS0CH100D50	
	C22	CCS0CH180J50	
	C15	CCS0CH221J50	
	C275, C277	CCS0CH330J50	
	C276	CCS0CH390J50	

Mark	No.	Description	Part No.
Q MGYCB ASSY			
SEMICONDUCTORS			
	IC301	CKS0CH100D50	
	IC202	CKS0CH220J50	
	IC102, IC103	CKS0CH470J50	
	IC101	CKS0CH560J50	
	IC201	CKS0CH6R0D50	
	0402, 0404, 0407, 0411, 0414	2PB709A	
	0401, 0403, 0412, 0413	2PD601A	
	0408-0410, 0415, 0416	2SC1740S	
	0417, 0420	DTA124EK	
	0418, 0419, 0421	DTC124EK	
COILS			
	L401-L403	LAU220J	
CAPACITORS			
	C433	CCS0CH100D50	
	C206, C401, C404	CCS0CH220J50	
	C405	CCS0CH470J50	
	C403	CCS0CH560J50	
	C402	CCS0CH6R0D50	
	C411	CCS0CH910J50	
	C101, C103, C109, C111, C113	CEAS101M10	
	C115, C201, C204, C207	CEAS101M10	
	C209, C210, C212, C214, C216	CEAS101M10	

Mark	No.	Description	Part No.
	C171, C173, C174, C179		CCS0CH470J50
	C23, C92, C93		CCS0CH470J50
	C24		CCS0CH910J50
	C16, C19		CEJA101M10
	C1, C110, C122, C126, C152		CEJA470M10
	C2, C208, C301, C305, C306		CEJA470M10
	C313, C4, C52, C53, C55		CEJA470M10
	C62, C64		CEJA470M10
	C12		CFTXA103J50
	C13		CFTXA334J50
	C11, C18, C20, C25, C26		CKSQYF103Z50
	C500		CKSQYF103Z50
	C107, C109, C113, C115, C121		CKSQYF104Z25
	C125, C153, C17, C207, C215		CKSQYF104Z25
	C217, C219, C220, C255, C28		CKSQYF104Z25
	C302-C304, C307-C312, C314		CKSQYF104Z25
	C51, C54, C56-C61, C65		CKSQYF104Z25
	C67		CKSQYF104Z25
	C14		CQMZA682J50
	VC11 (20pF)		VCM-008

RESISTORS

R52		RN1/10SE1801D
R51		RS1/10S1000F
R74		RS1/10S1001F
R77		RS1/10S10R0F
R71		RS1/10S1501F
R72		RS1/10S1802F
R76		RS1/10S27R0F
R79		RS1/10S3300F
R80		RS1/10S3900F
R78		RS1/10S39R0F
R73		RS1/10S47R0F
R75		RS1/10S5600F
R81		RS1/10S68R0F
VR91 (330kΩ)		VCP1143
Other Resistors		RS1/10S□□□J

OTHERS

X11	CRYSTAL (3.579545MHz)	VSS1107
	PCB BINDER	VEF1040
CN12	26P FFC CONNECTOR	VKN1202
KN102	EARTH METAL FITTING	VNF1084

6. ADJUSTMENT (調整方法)

6.1 ADJUSTMENT ITEMS AND LOCATION (調整項目と調整位置)

■ Adjustment Items

[Mechanical Part]

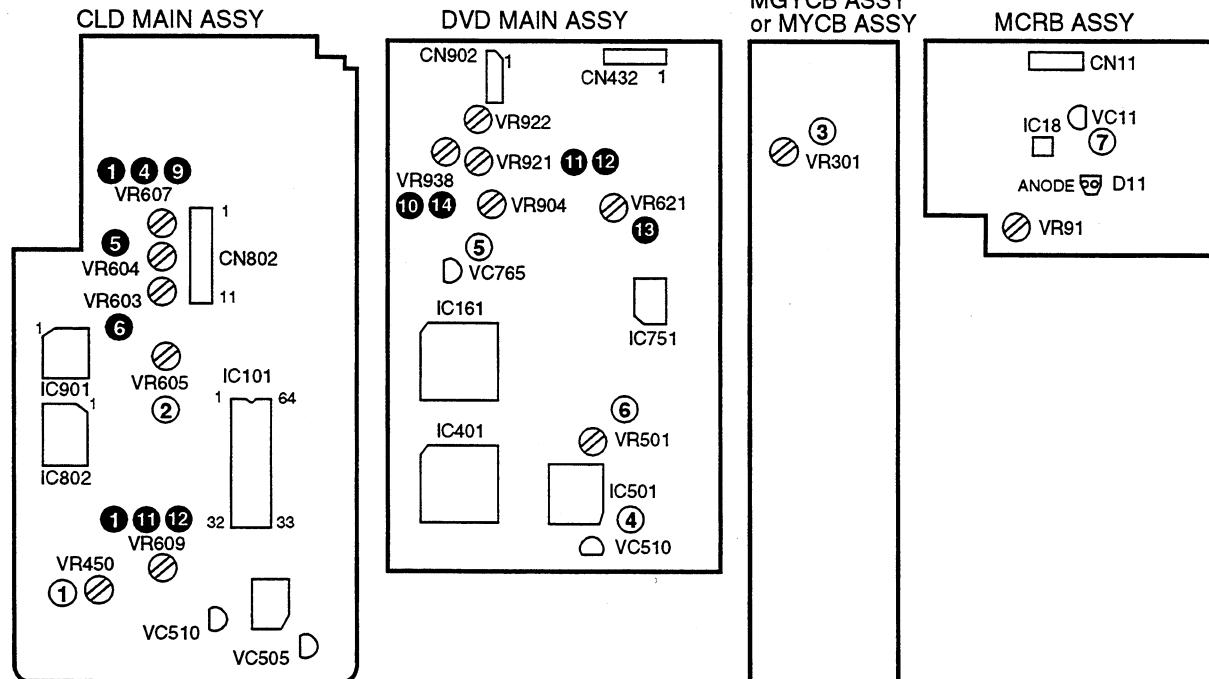
[CLD]

- ① Tilt Offset Adjustment
(チルトオフセット調整)
- ② Tangential Direction Angle Adjustment for Side A
(A面タンジェンシャル傾き調整)
- ③ Spindle Motor Centering Adjustment for Side A
(A面スピンドル芯出し調整)
- ④ Crosstalk Check and Fine Tilt Offset Adjustment for Side A
(A面クロストーク確認及び、チルトオフセット微調整)
- ⑤ Focus Servo Loop Gain Adjustment
(フォーカスサーボループゲイン調整)
- ⑥ Tracking Servo Loop Gain Adjustment
(トラッキングサーボループゲイン調整)
- ⑦ Tangential Direction Angle Adjustment for Side B
(B面タンジェンシャル傾き調整)
- ⑧ Spindle Motor Centering Adjustment for Side B
(B面スピンドル芯出し調整)
- ⑨ Crosstalk Check and Fine Tilt Offset Adjustment for Side B
(B面クロストーク確認及び、チルトオフセット微調整)

[DVD]

- ⑩ DVD Focus S-curve Level Coarse Adjustment
(DVDフォーカスS字レベル粗調整)
- ⑪ RF MAX Adjustment
(RF MAX調整)
- ⑫ Jitter Adjustment
(ジッター調整)
- ⑬ Tracking Error Level Adjustment
(トラッキングエラーレベル調整)
- ⑭ DVD Focus S-curve Level Fine Adjustment
(DVDフォーカスS字レベル微調整)

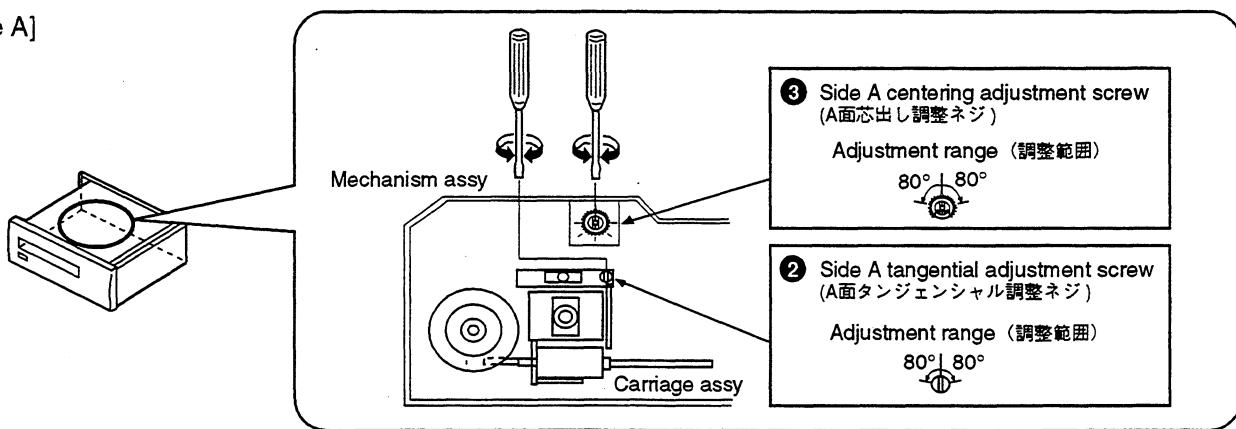
■ Adjustment Points (PCB Part)



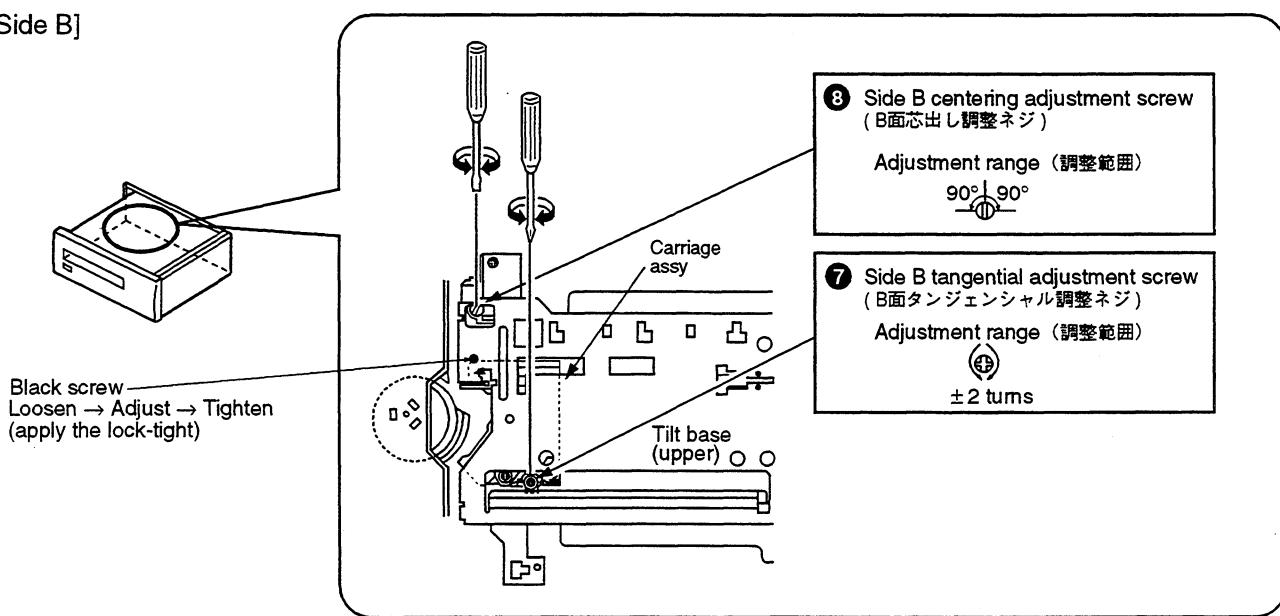
■ Adjustment Points (Mechanism Part)

CLD

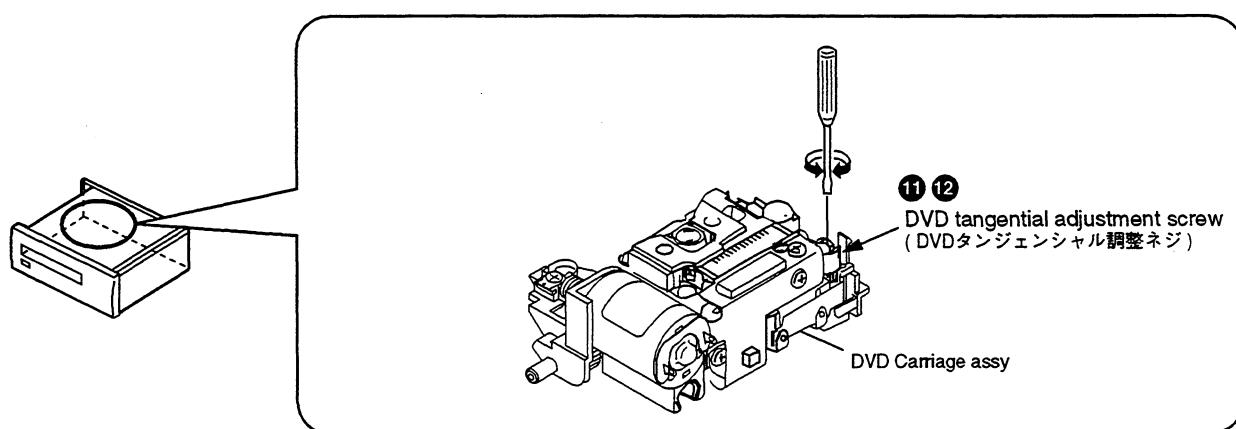
[Side A]



[Side B]

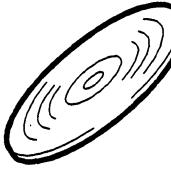
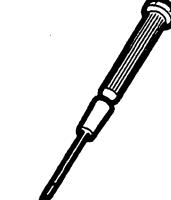
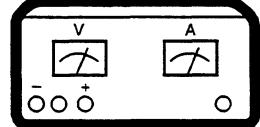
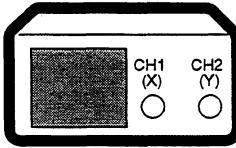
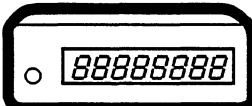
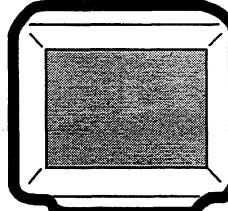
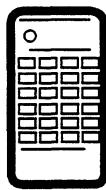
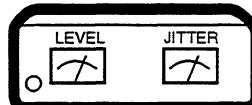
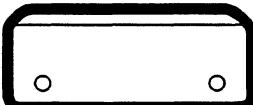
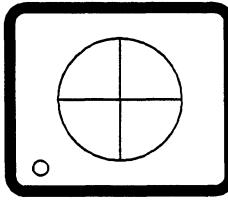


DVD



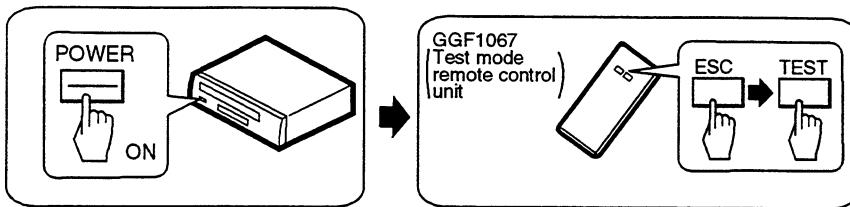
Note : Apply the lock-tight.
(調整ネジは、調整後ボンドロックする。)

6.2 JIGS AND MEASURING INSTRUMENTS (調整に必要な治工具類)

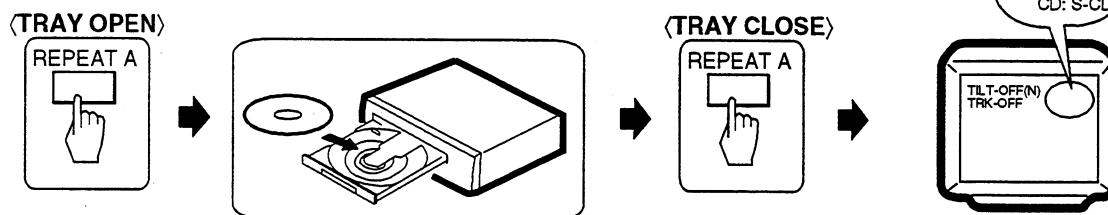
6.3 TEST MODE (テストモード)

TEST MODE: ON

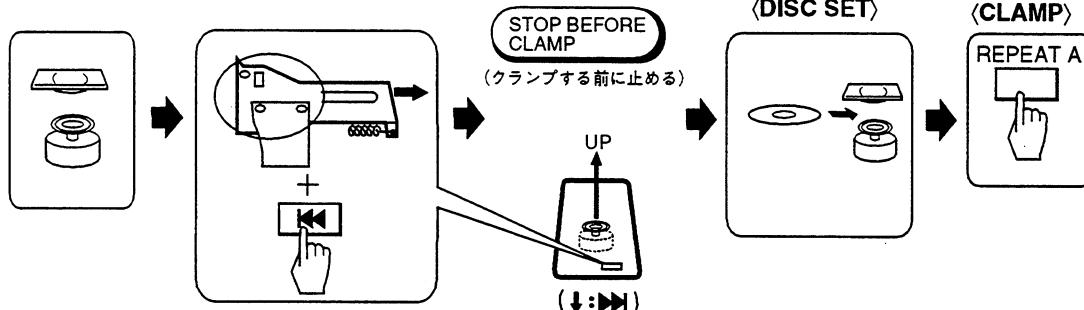


TEST MODE: DISC SET

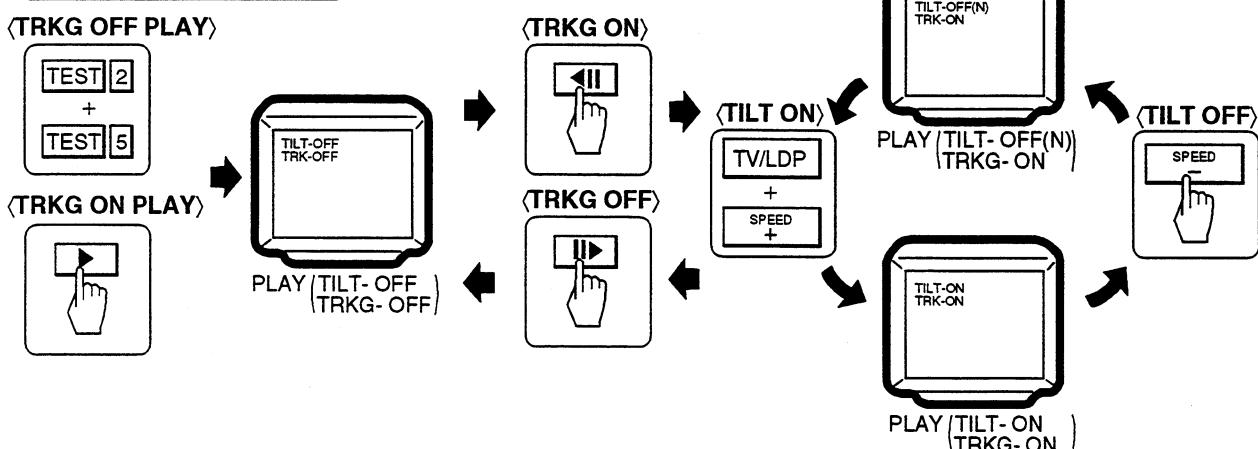
With TRAY (トレー有りの場合)



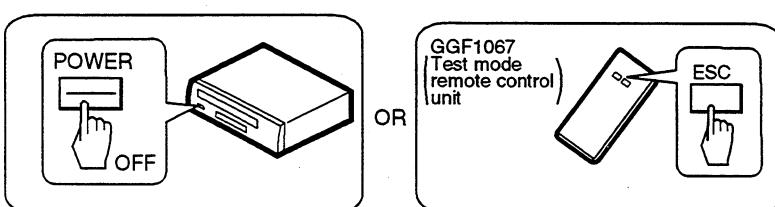
No TRAY (トレー無しの場合)



TEST MODE: PLAY



TEST MODE: OFF



6.4 NECESSARY ADJUSTMENT POINTS (必要な調整項目)

When (このような時)

Adjustment Points

■ EXCHANGE MECHANISM ASSY PARTS
(メカASSY部品を交換したとき)Exchange pickup (CLD)
(CLDのピックアップを交換したとき)Mechanical point
1, 2, 3, 4, 5, 6, 7, 8, 9

Electric point

Exchange pickup (DVD)
(DVDのピックアップを交換したとき)Mechanical point
10, 11, 12, 13, 14

Electric point

Exchange spindle motor
(スピンドルモータを交換したとき)Mechanical point
3, 8

Electric point

■ EXCHANGE PCB ASSY
(PCB ASSYを交換したとき)Exchange board
CLD MAIN ASSY
(マザーボードを交換したとき)Mechanical point
1, 4, 5, 6, 9

Electric point

Note : ①, ② and ③ are adjusted already. (①, ②, ③は調整済)

Exchange board
DVD MAIN ASSY
(マザーボードを交換したとき)Mechanical point
10, 11, 12, 13, 14

Electric point

Note : ④, ⑤ and ⑥ are adjusted already. (④, ⑤, ⑥は調整済)

Exchange board
MCRB ASSY
(MCRB ASSYを交換したとき)

Mechanical point

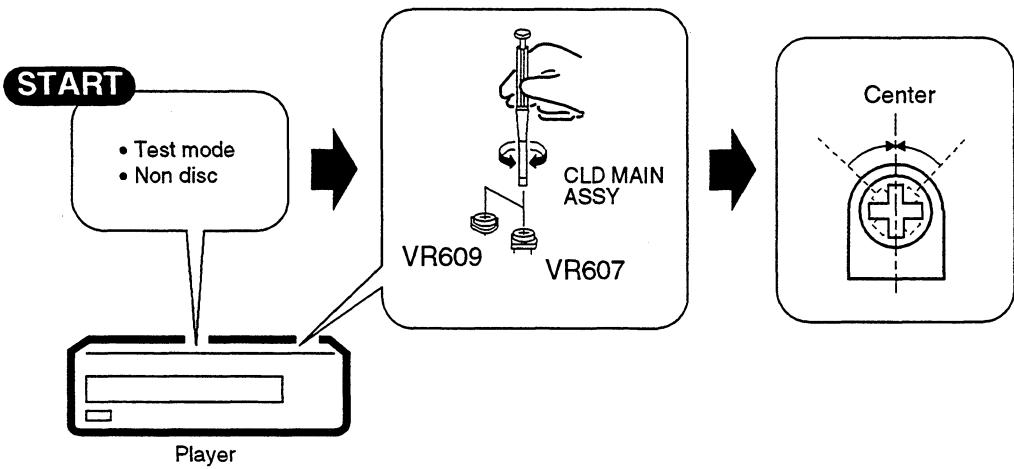
Electric point

Note : ⑦ and ⑧ is adjusted already. (⑦, ⑧は調整済)

6.5. MECHANICAL ADJUSTMENT (機構系の調整)

1 Tilt Offset Adjustment

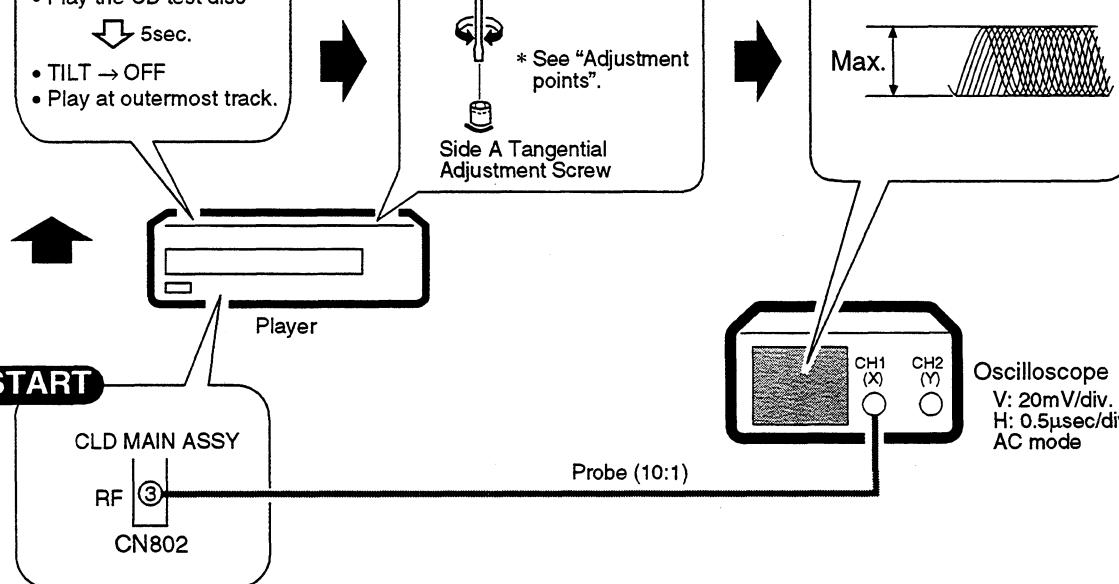
(チルトオフセット調整)



2 Tangential Direction Angle Adjustment for Side A

(A面タنجエンシャル傾き調整)

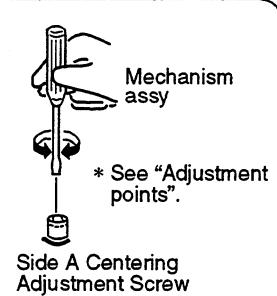
- Test mode
TILT → ON
TRKG → ON
- Play the CD test disc
↓ 5sec.
- TILT → OFF
- Play at outermost track.



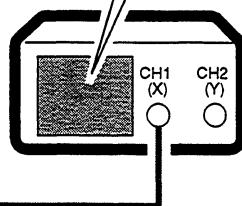
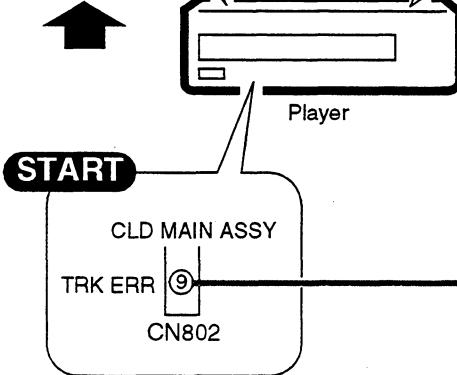
outermost : 最外周

3 Spindle Motor Centering Adjustment for Side A
(A面スピンドル芯出し調整)

- Test mode
TILT → ON
TRKG → OFF
- Play the CD test disc
at innermost track.



Max.

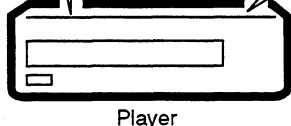
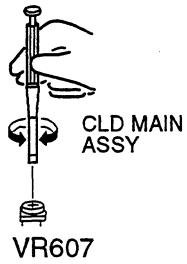


Oscilloscope
V: 50mV/div.
H: 10msec/div.
DC mode

innermost : 最内周

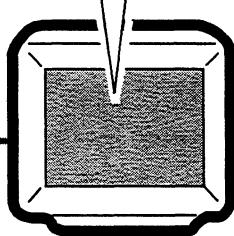
4 Crosstalk Check and Fine Tilt Offset Adjustment for Side A
(A面クロストーク確認及び、チルトオフセット微調整)

- Test mode
TILT → ON
TRKG → ON
- Still the LD test disc at #115.



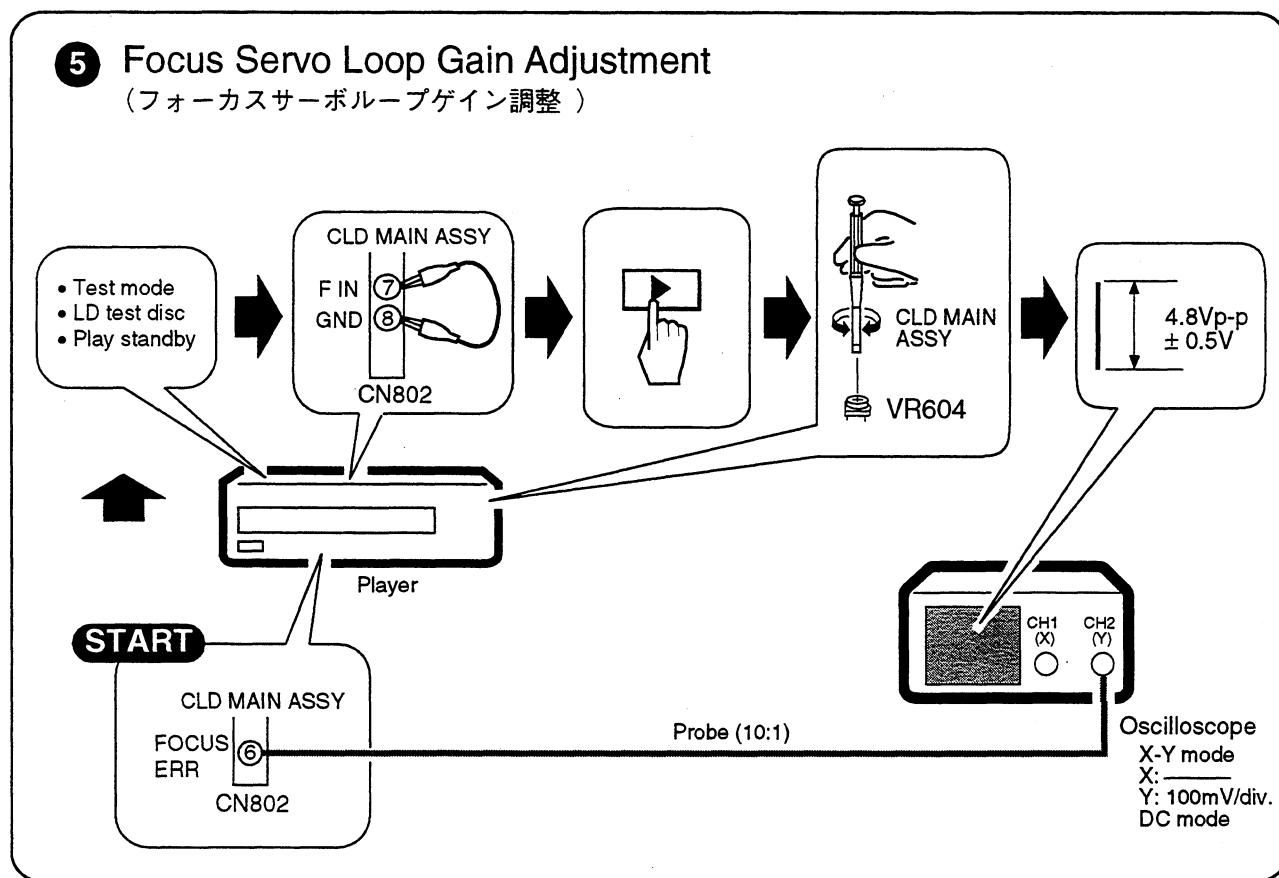
VIDEO OUT

VIDEO IN

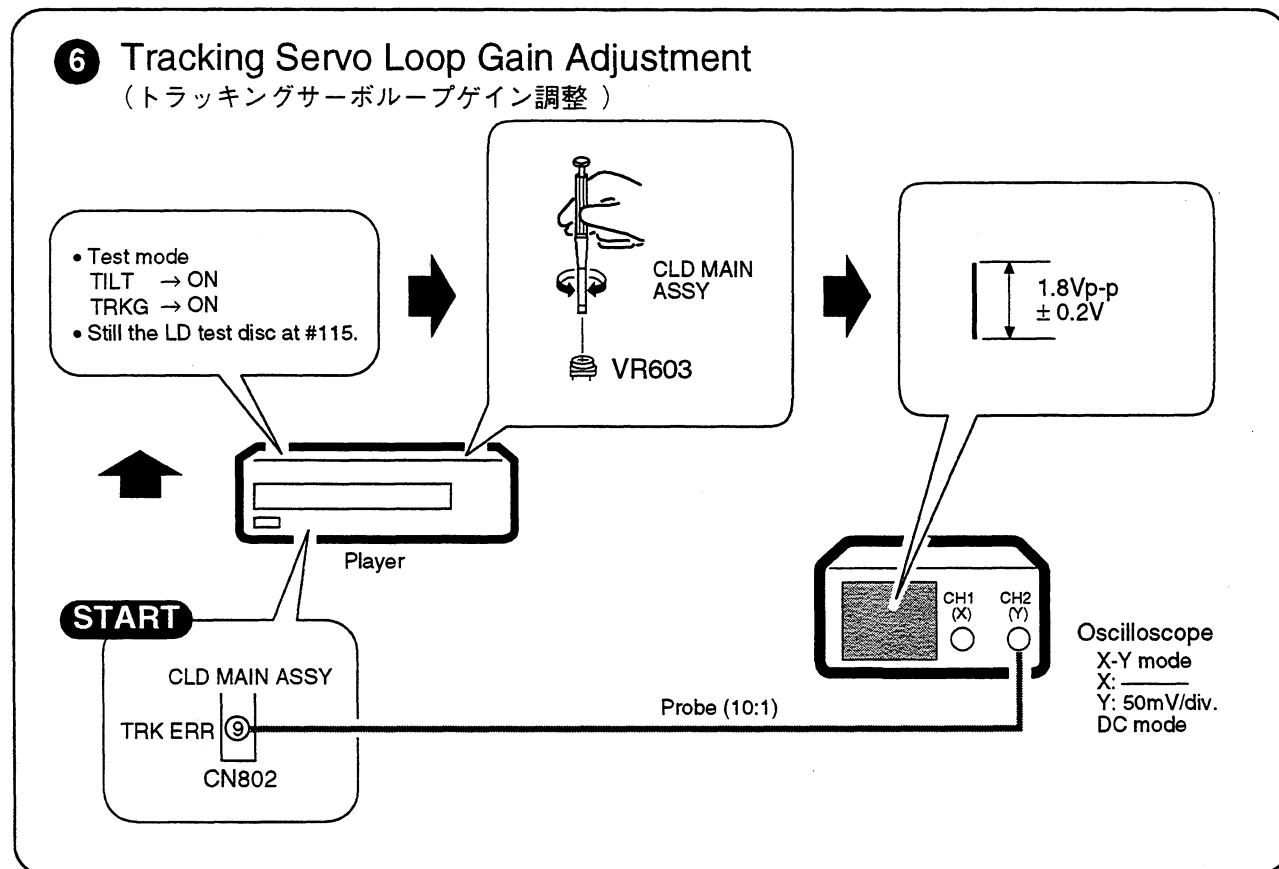


TV monitor

5 Focus Servo Loop Gain Adjustment (フォーカスサーボループゲイン調整)



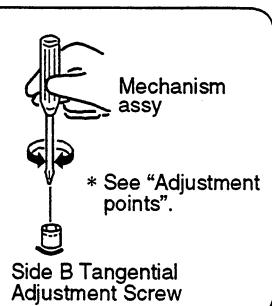
6 Tracking Servo Loop Gain Adjustment (トラッキングサーボループゲイン調整)



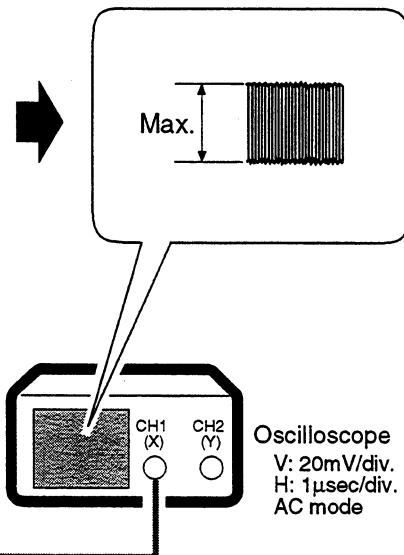
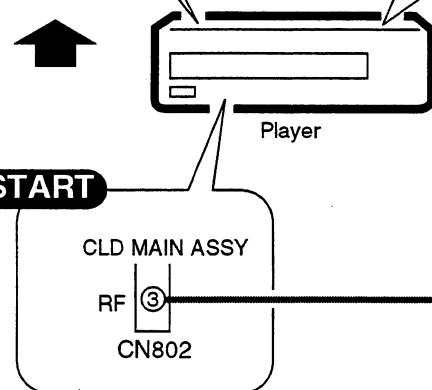
7 Tangential Direction Angle Adjustment for Side B

(B面タンジェンシャル傾き調整)

- Test mode
TILT → ON
TRKG → ON
- Still the LD test disc
at #115.



* See "Adjustment points".

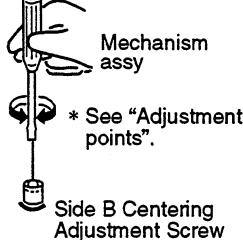


Oscilloscope
V: 20mV/div.
H: 1μsec/div.
AC mode

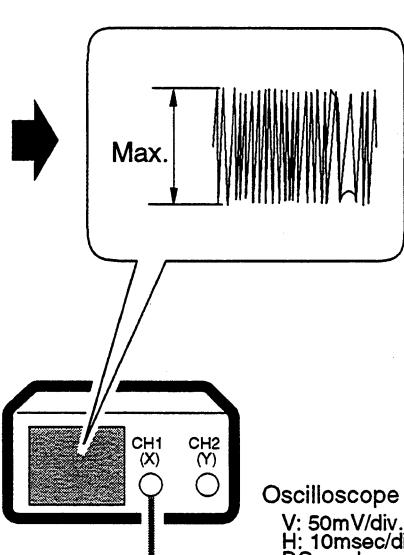
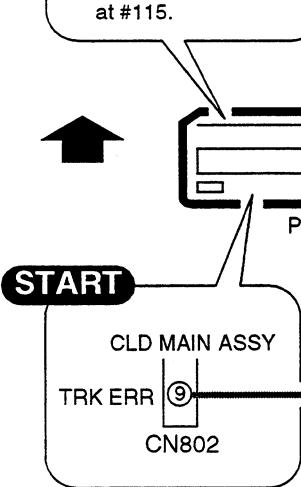
8 Spindle Motor Centering Adjustment for Side B

(B面スピンドル芯出し調整)

- Test mode
TILT → ON
TRKG → OFF
- Still the LD test disc
at #115.

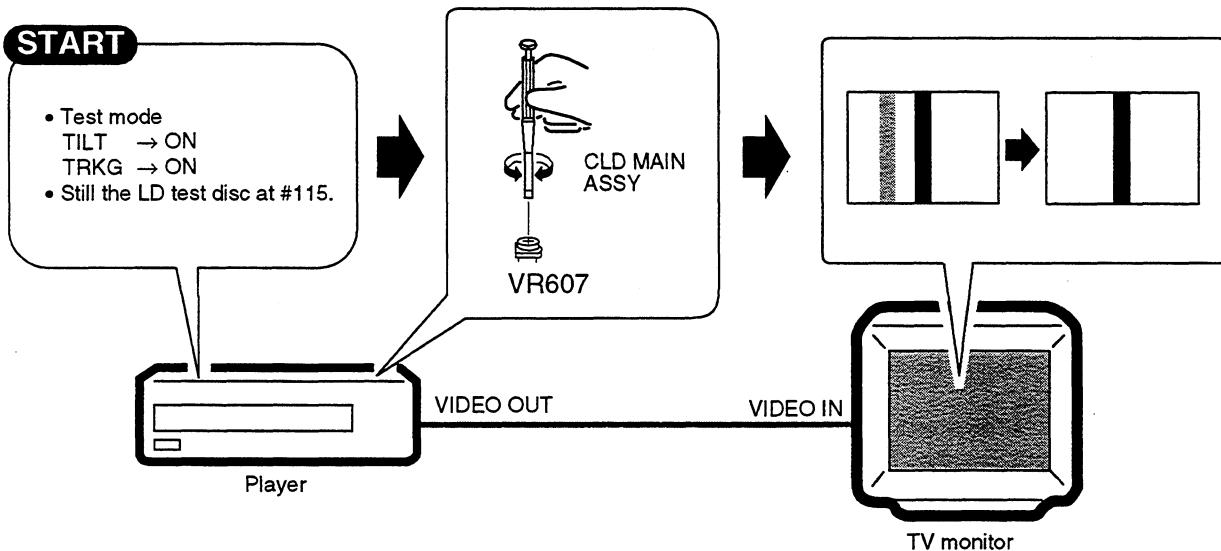


* See "Adjustment points".

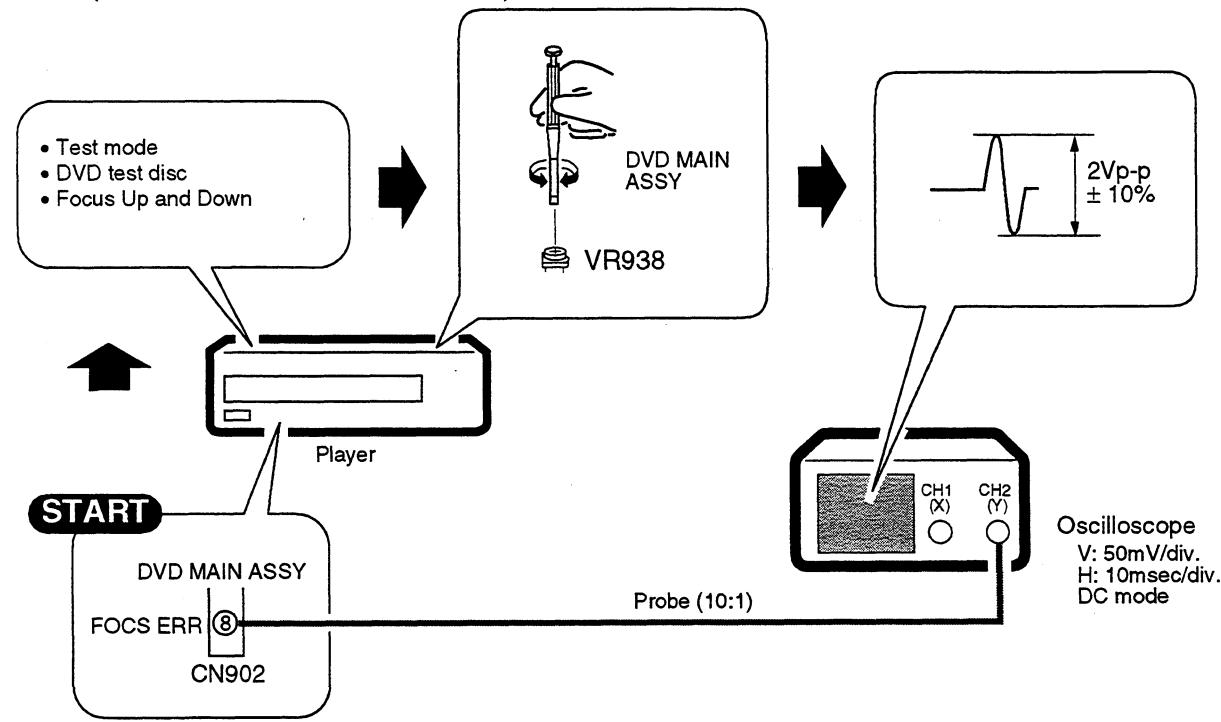


Oscilloscope
V: 50mV/div.
H: 10msec/div.
DC mode

9 Crosstalk Check and Fine Tilt Offset Adjustment for Side B
(B面クロストーク確認及び、チルトオフセット微調整)



10 DVD Focus S-curve Level Coarse Adjustment
(DVD フォーカスS字レベル粗調整)



11 RF MAX Adjustment

(RF MAX調整)

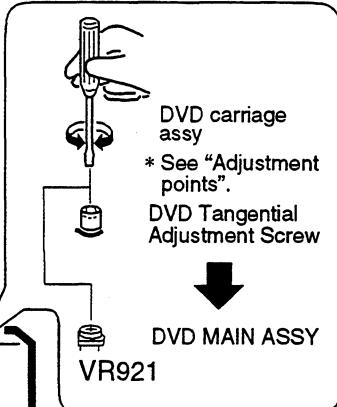
- Test mode
TRKG → OFF
- Play the DVD test disc
at outermost track.



START

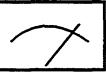
DVD MAIN ASSY
RF MIRR ⑤
CN902

Equalizer unit

DVD MAIN ASSY
VR921

RF Level MAX.

LEVEL



CHECK

RF Level 0.6V~1.2V
(AGC : OFF)
(BIT : 11T)
(1:1 Probe)

Jitter meter

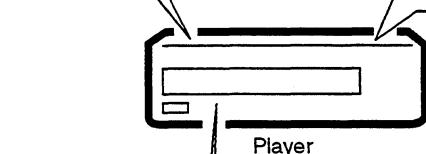
LEVEL JITTER

outermost : 最外周

12 Jitter Best Adjustment

(ジッターベスト調整)

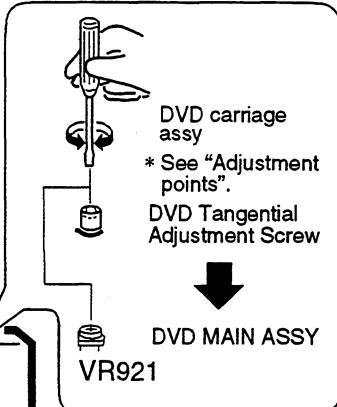
- Test mode
TRKG → ON
- Play the DVD test disc
at outermost track.



START

DVD MAIN ASSY
RF MIRR ⑤
CN902

Equalizer unit

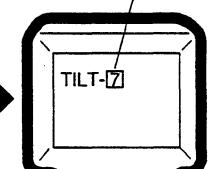
DVD MAIN ASSY
VR921TILT UP/DOWN
(◀, ▶)

Jitter MIN.



CLD MAIN
ASSY
VR609

TILT ERROR : 7



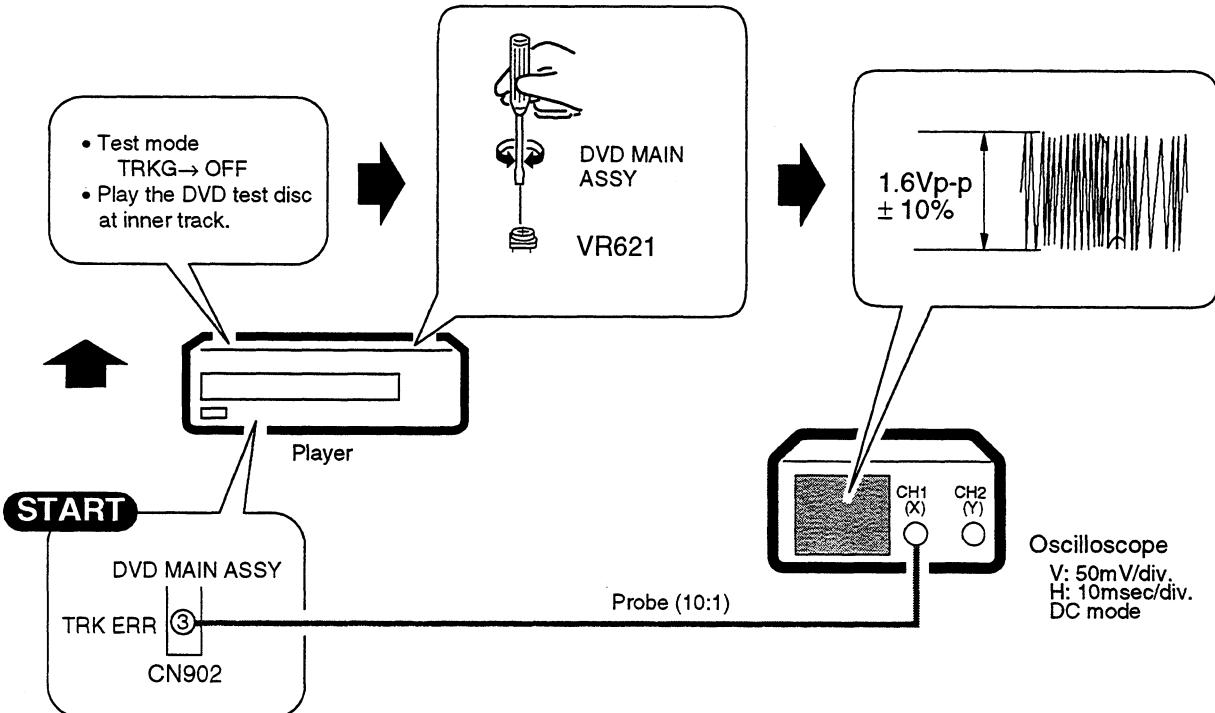
TILT-7

CHECK

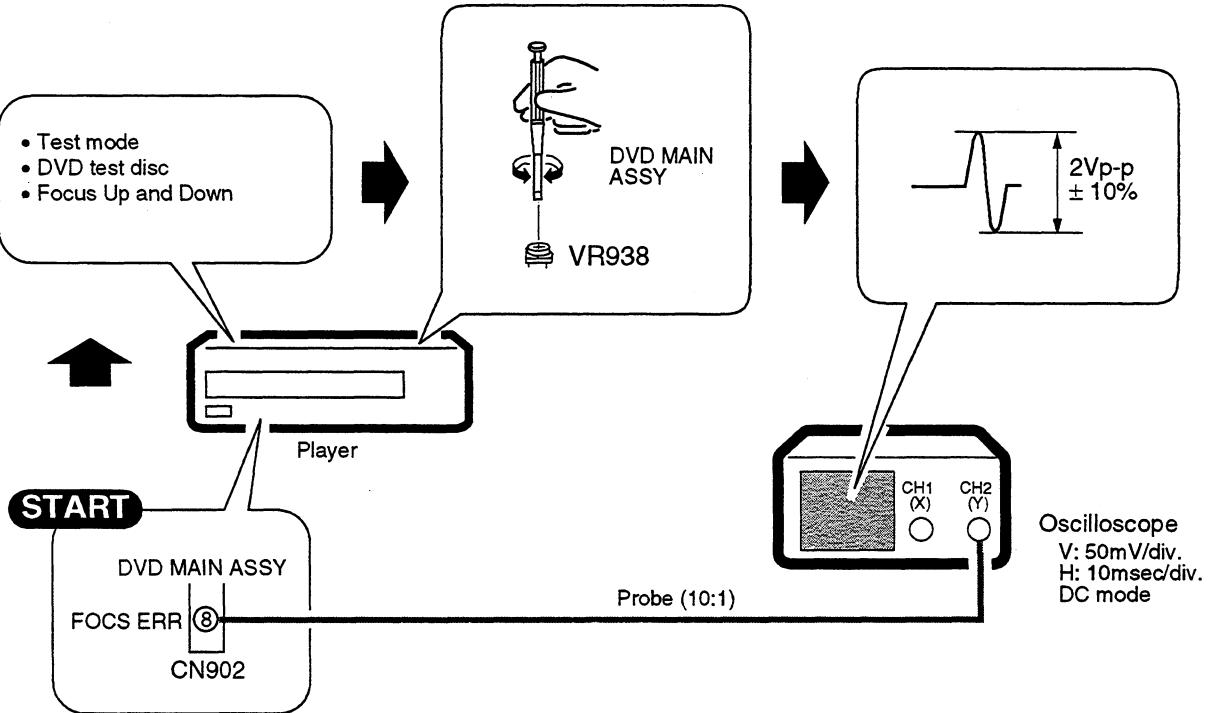
RF Level 0.8V~1.4V
(AGC : ON)
(BIT : 11T)
(1:1 Probe)

outermost : 最外周

13 Tracking Error Level Adjustment (トラッキングエラーレベル調整)



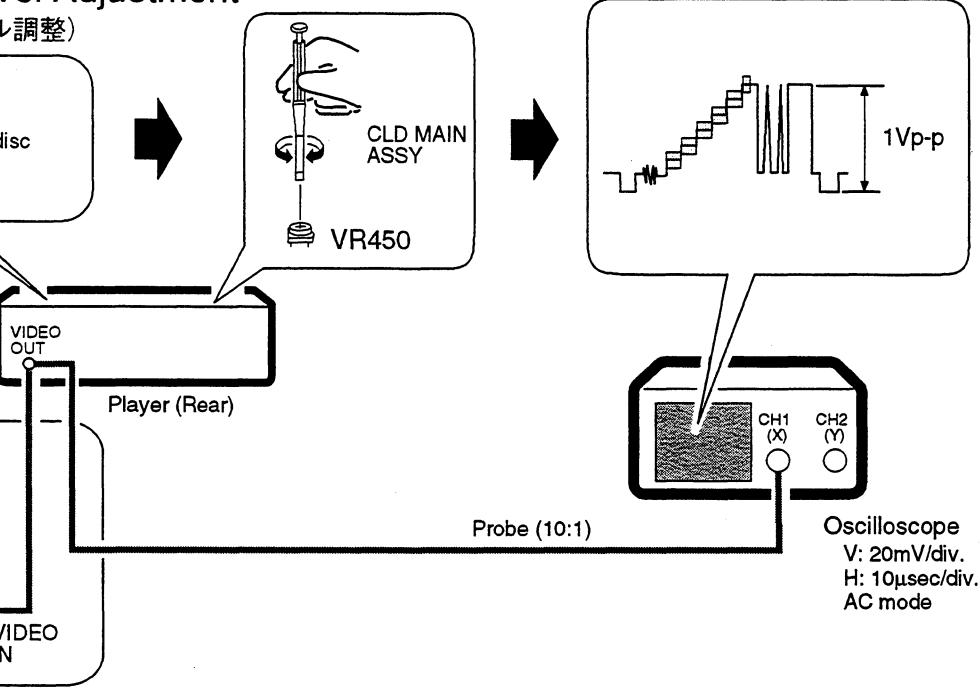
14 DVD Focus S-curve Level Fine Adjustment (DVD フォーカスS字レベル微調整)



6.6 ELECTRICAL ADJUSTMENT (電気系の調整)

① Video Level Adjustment (ビデオレベル調整)

- Normal mode
- Still the LD test disc at #19900.

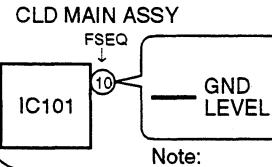


② PLL Offset Adjustment (PLLオフセット調整)

(PLLオフセット調整)

- Test mode
TILT → OFF
TRKG → OFF
- Play the CD test disc.

<CHECK for PLL UNLOCK >



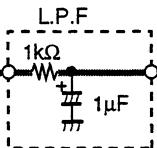
Example
E1 :
— 3.8V



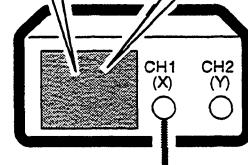
START

CLD MAIN ASSY

31

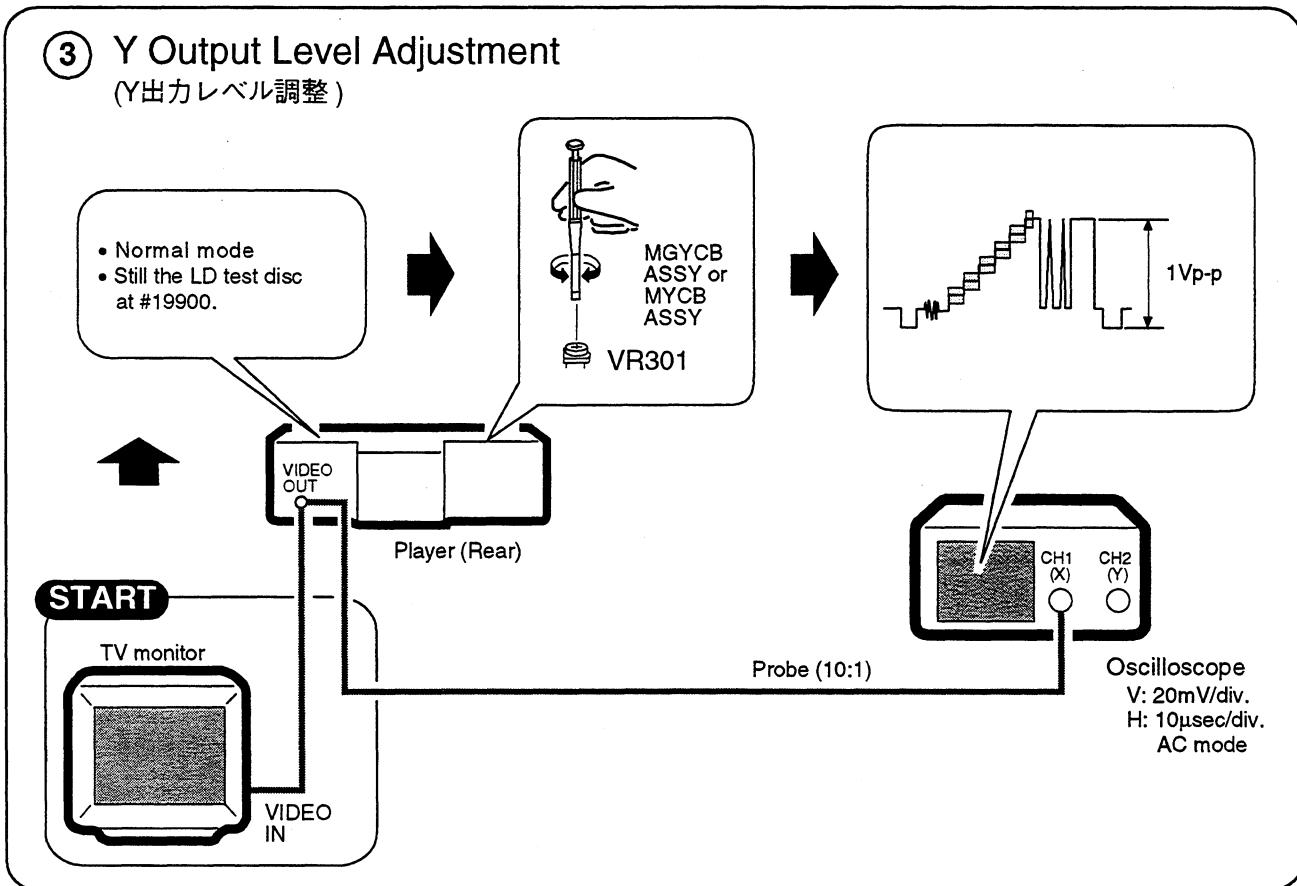


Probe (10:1)

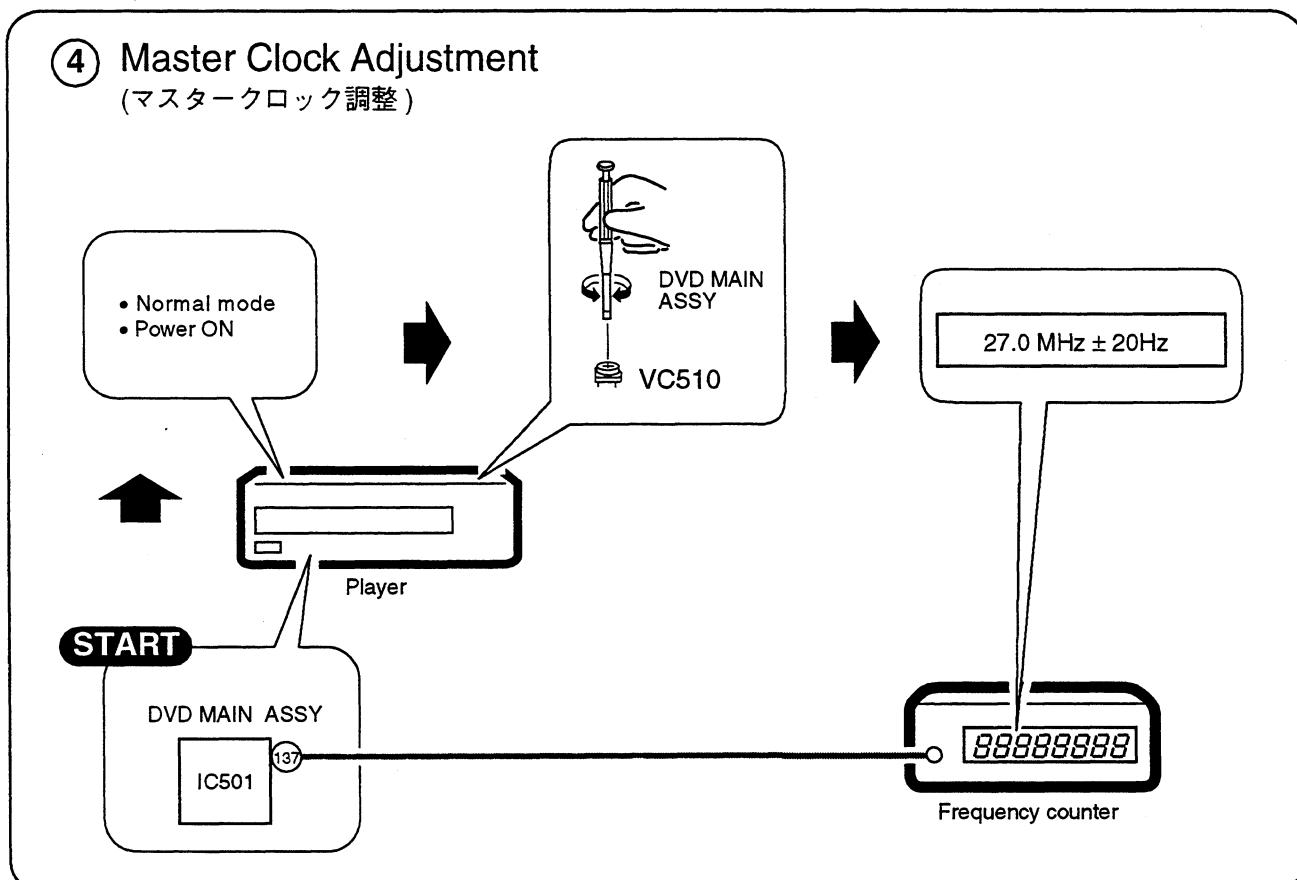


Oscilloscope
V: 50mV/div.
H: 5msec/div.
DC mode

③ Y Output Level Adjustment
(Y出力レベル調整)

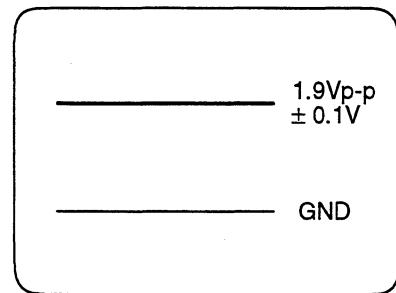
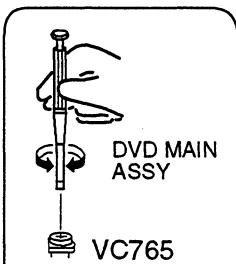


④ Master Clock Adjustment
(マスタークロック調整)



⑤ VCO Offset Adjustment
(VCOオフセット調整)

- Normal mode
- Play the DVD test disc



START

DVD MAIN ASSY

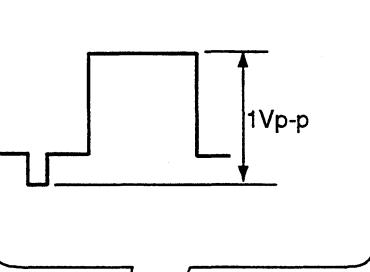
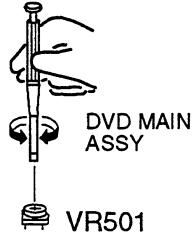
IC751

Probe (10:1)

Oscilloscope
V: 50mV/div.
H: 10msec/div.
DC mode

⑥ Video Output Adjustment
(ビデオ出力調整)

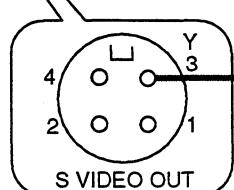
- Normal mode
- Still the DVD test disc
(100% white screen)



START

TV monitor

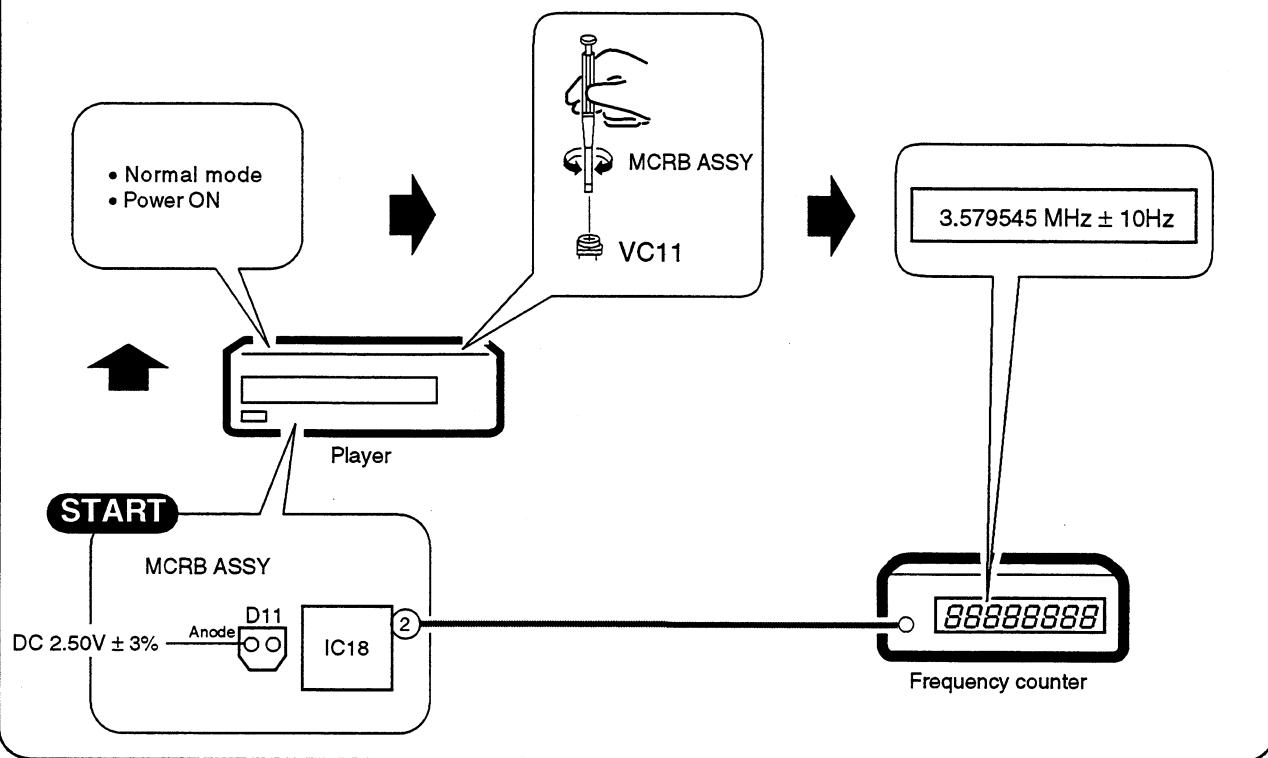
VIDEO IN



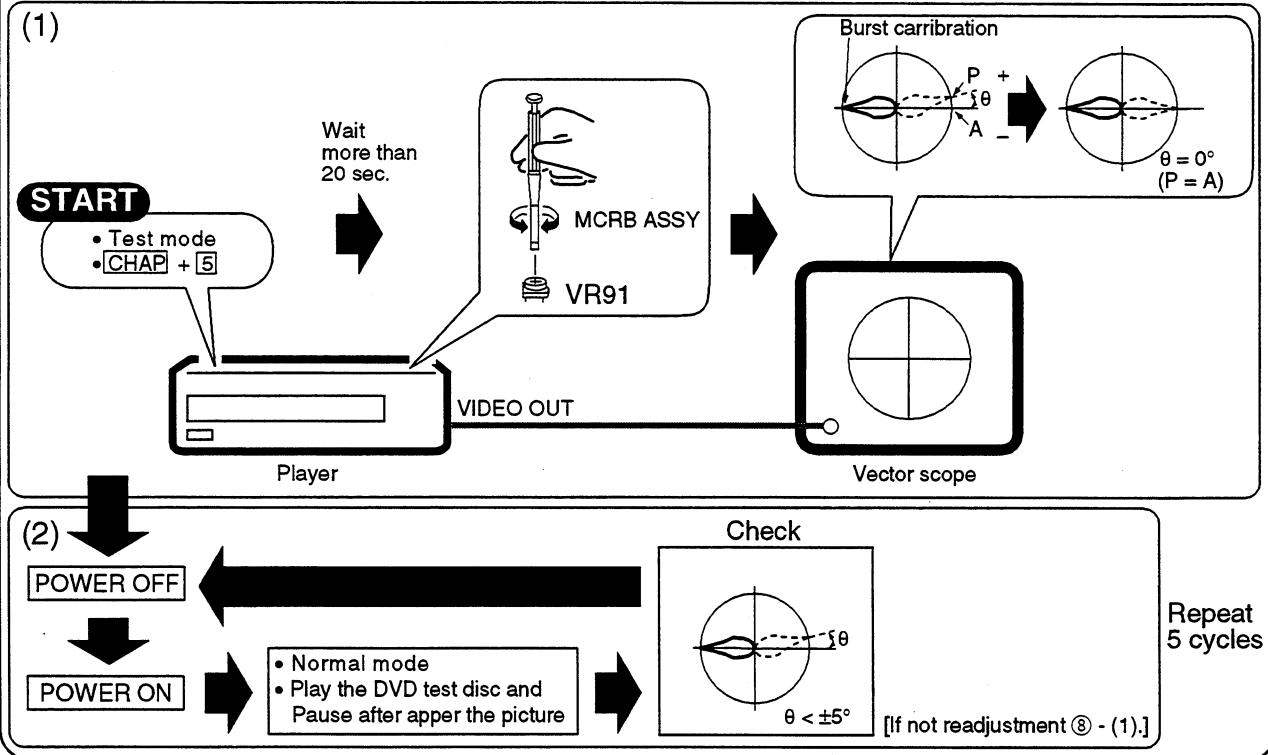
Probe (10:1)

Oscilloscope
V: 20mV/div.
H: 10μsec/div.
AC mode

⑦ MCRB Master CLK Adjustment
(MCRBマスターCLK調整)

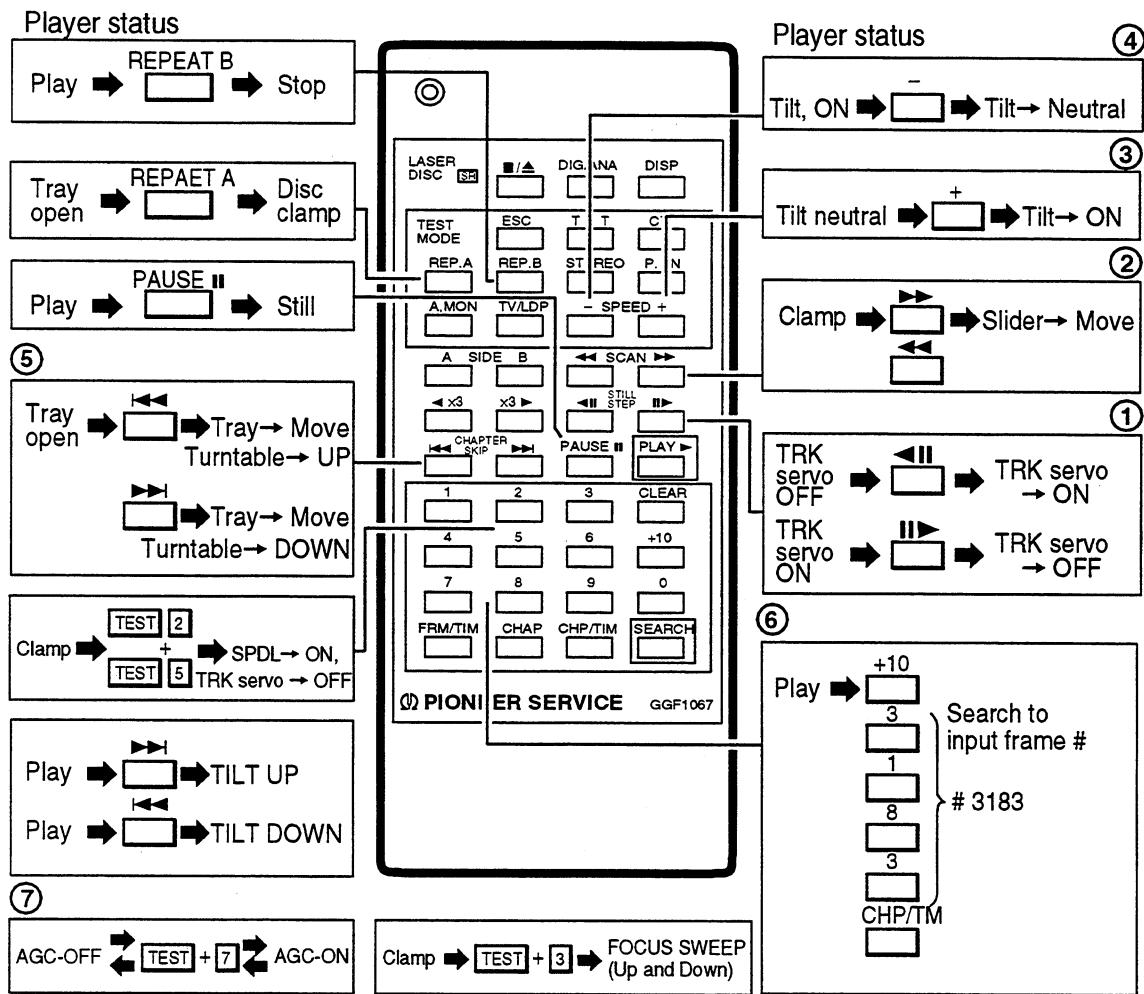


⑧ MCRB Inverter Burst Adjustment
(MCRB反転バースト調整)

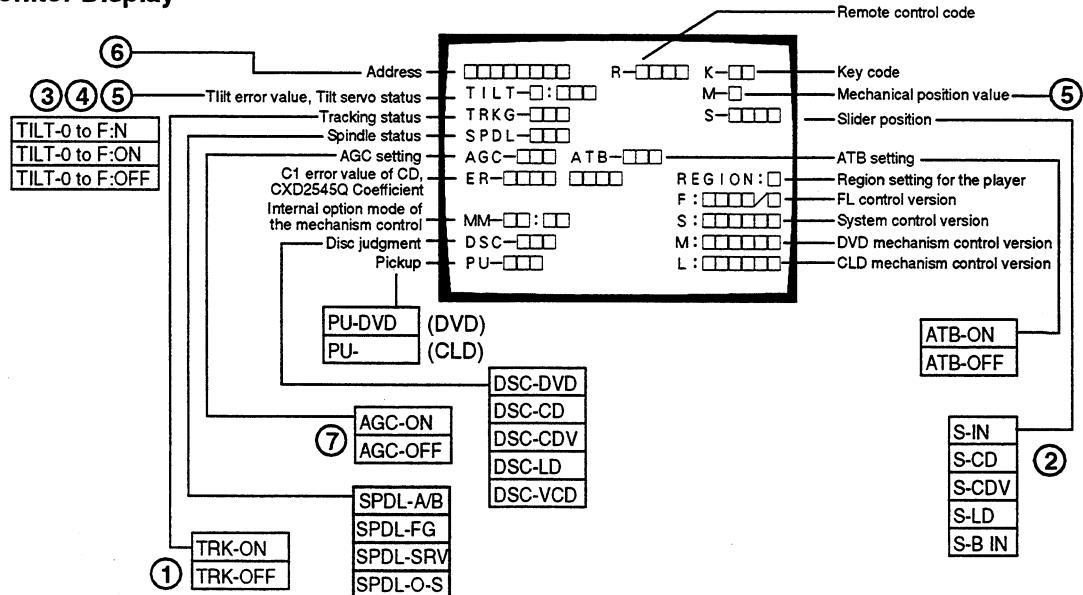


6.7 OPERATIONS IN THE TEST MODE (テストモード時のサービス用リモコン操作方法)

■ Test Mode Remote Control Unit (GGF1067)



■ TV Monitor Display

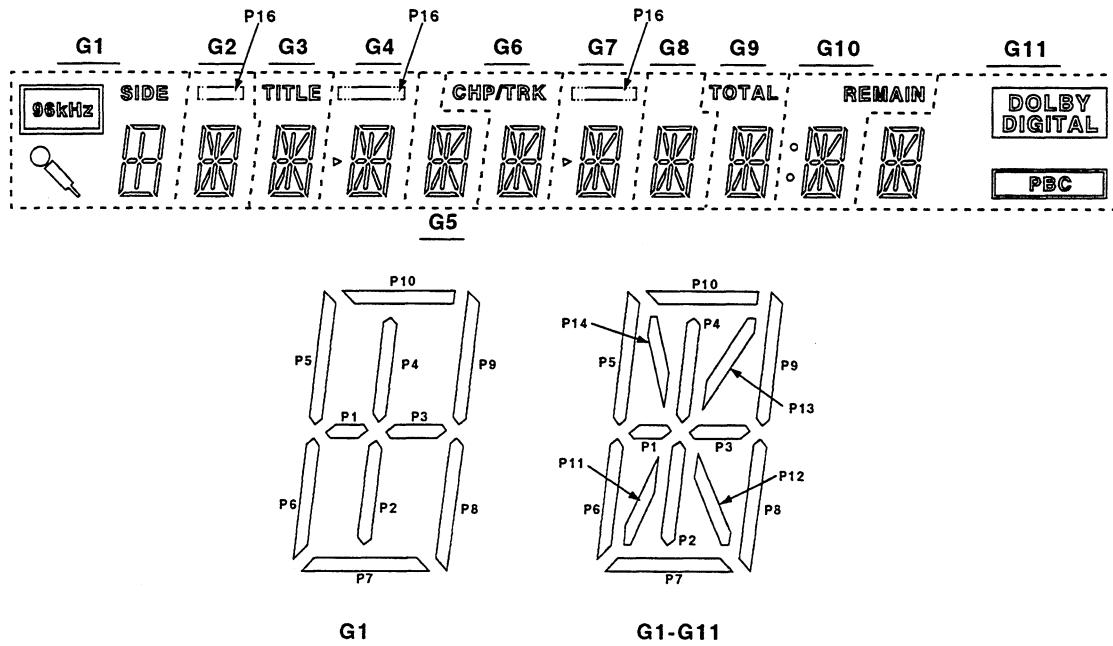


7. GENERAL INFORMATION

7.1 DISPLAY

■ VAW1042 (FLPB ASSY : V101)

- FL DISPLAY



- ANODE AND GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
P2	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2
P3	P3	P3	P3	P3	P3	P3	P3	P3	P3	P3	P3
P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4
P5	P5	P5	P5	P5	P5	P5	P5	P5	P5	P5	P5
P6	P6	P6	P6	P6	P6	P6	P6	P6	P6	P6	P6
P7	P7	P7	P7	P7	P7	P7	P7	P7	P7	P7	P7
P8	P8	P8	P8	P8	P8	P8	P8	P8	P8	P8	P8
P9	P9	P9	P9	P9	P9	P9	P9	P9	P9	P9	P9
P10	P10	P10	P10	P10	P10	P10	P10	P10	P10	P10	P10
P11		P11	P11	P11	P11	P11	P11	P11	P11	P11	P11
P12		P12	P12	P12	P12	P12	P12	P12	P12	P12	P12
P13	96kHz	P13	P13	P13	P13	P13	P13	P13	P13	P13	P13
P14		P14	P14	P14	P14	P14	P14	P14	P14	P14	P14
P15											PBC
P16	SIDE	P16	TITLE	P16		CHP/TRK	P16		TOTAL	REMAIN	DOLBY DIGITAL

- PIN ASSIGNMENT

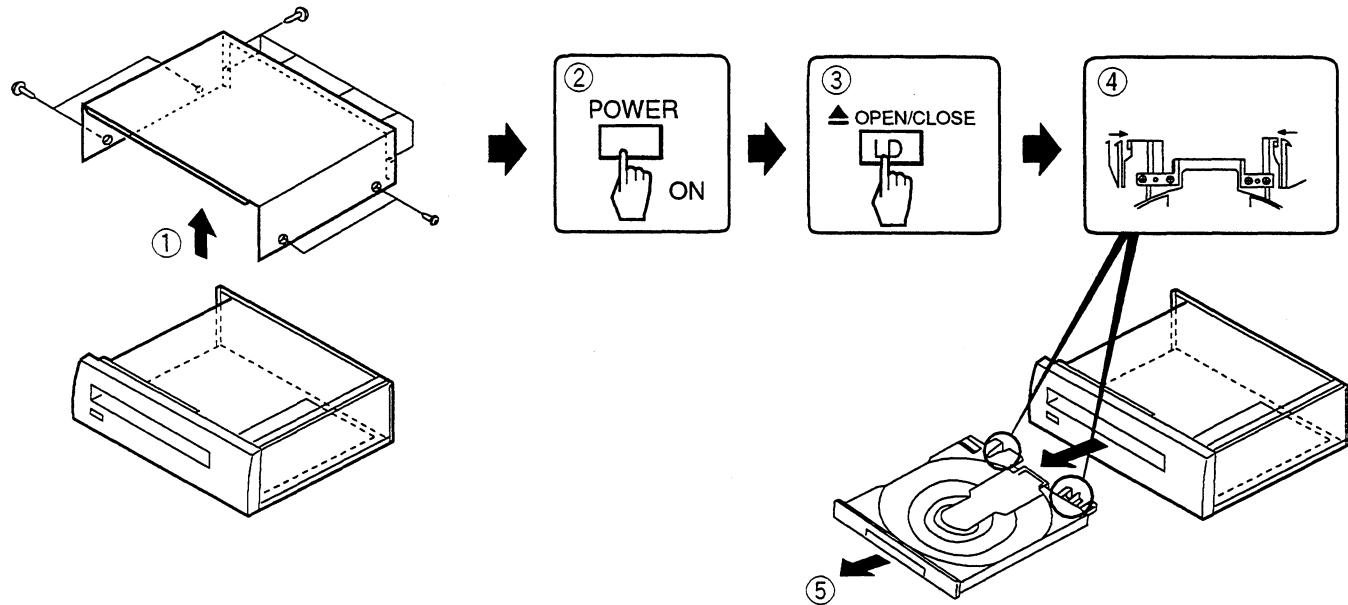
Pin No.	1	2	3	4	5	6	7	8	9	10	11-24	25	26	27	28	29	30	31	32
Assignment	F1	F1	NP	NL	P16	P15	P14	P13	P12	P11	NL	P10	P9	P8	P7	P6	NL	P5	P4
Pin No.	33	34	35	36-40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Assignment	P3	P2	P1	NL	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	NL	NP	F2	F2

F1, F2 : Filament G1-G11 : Grid P1-P16 : Anode NP : No Pin NL : No Lead

7.2 DISASSEMBLY/ASSEMBLY (分解/組立の手順)

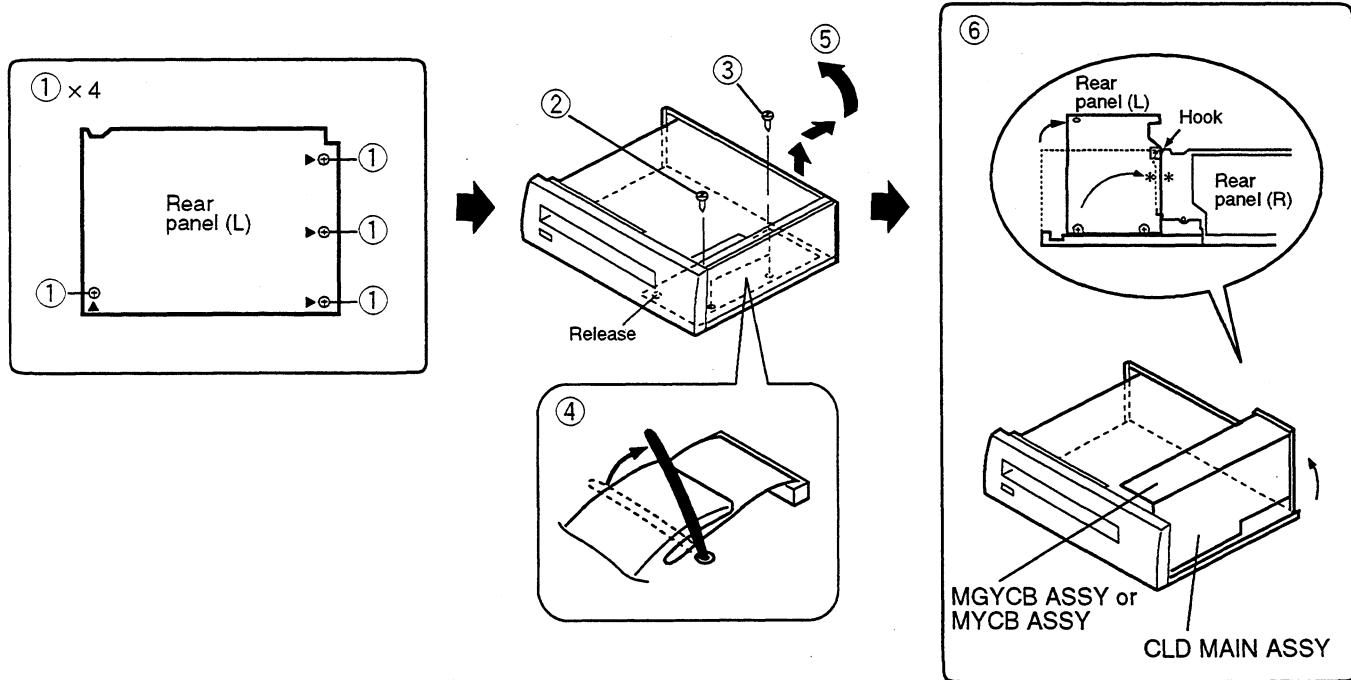
(1) DISC TRAY

- Disassembly : ① → ② → ③ → ④ → ⑤
- Assembly : ⑤ → ①



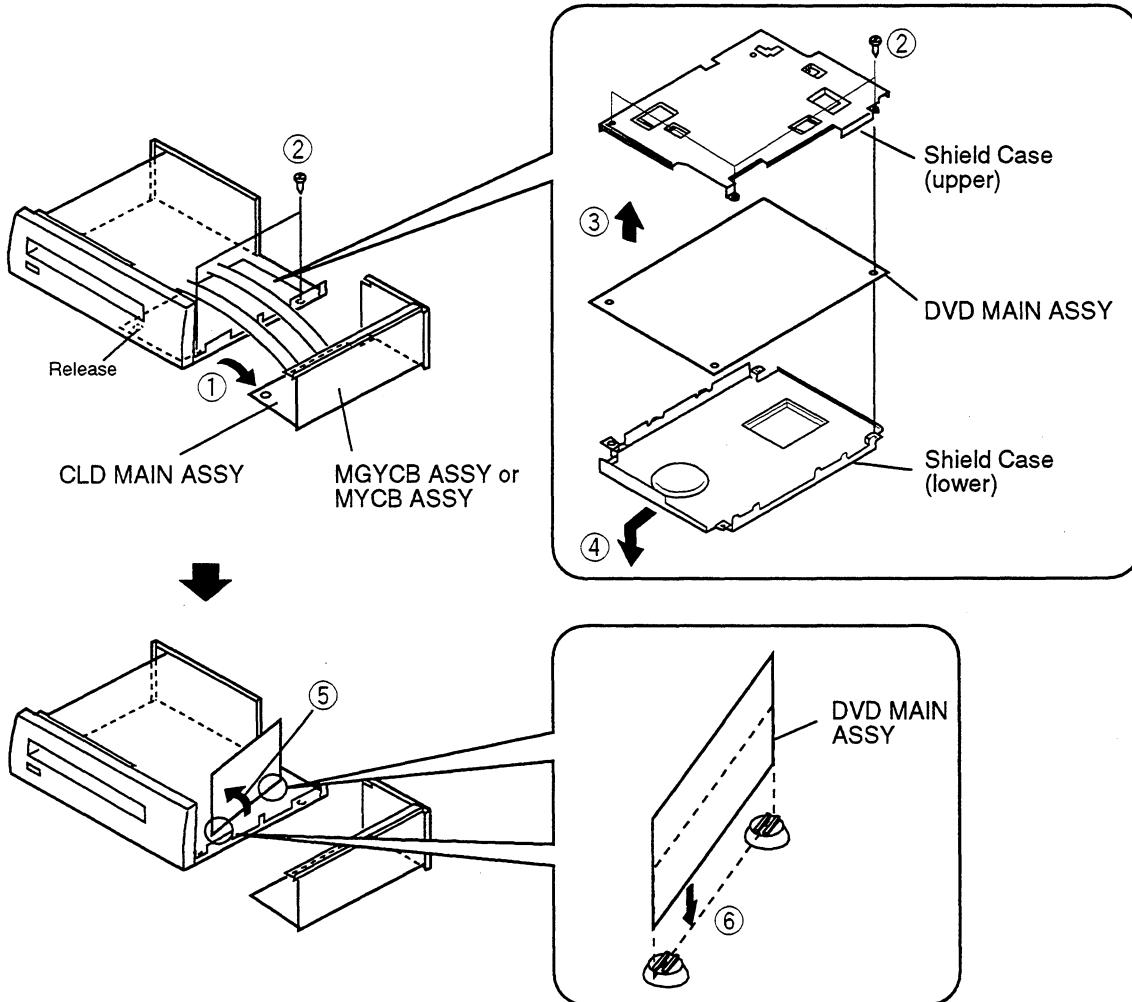
(2) CLD MAIN ASSY

- Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥
- Assembly : ⑥ → ⑤ → ④ → ③ → ② → ①



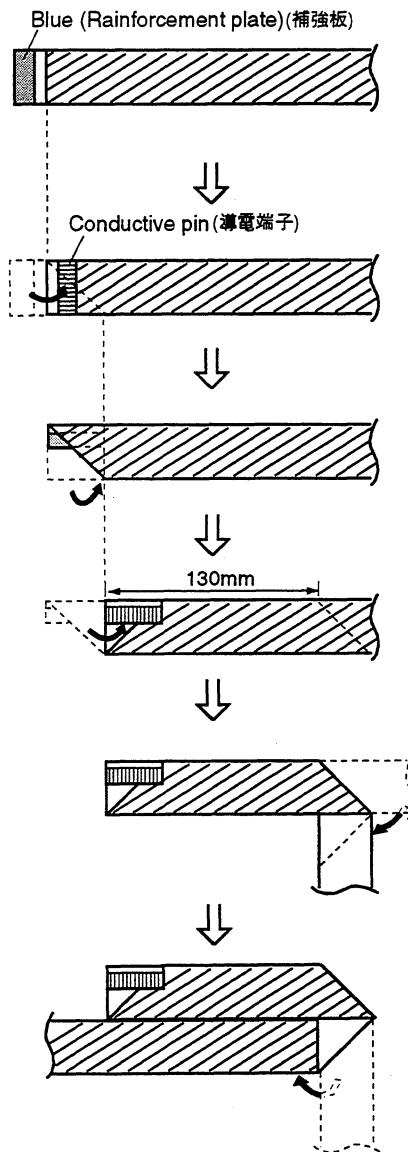
(3) DVD MAIN ASSY

- Disassembly : ①→②→③→④→⑤→⑥
- Assembly : ⑥→④→③→②→①

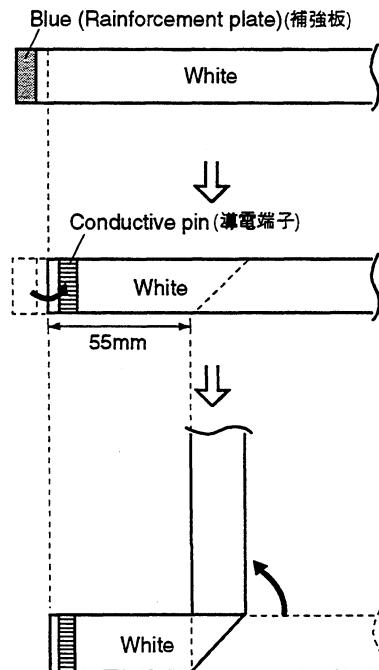


7.3 HOW TO BEND THE FLEXIBLE CABLE (フレキシブルケーブルの折り方)

(1) THE FLEXIBLE CABLE
FOR CLD CARRIAGE ASSY

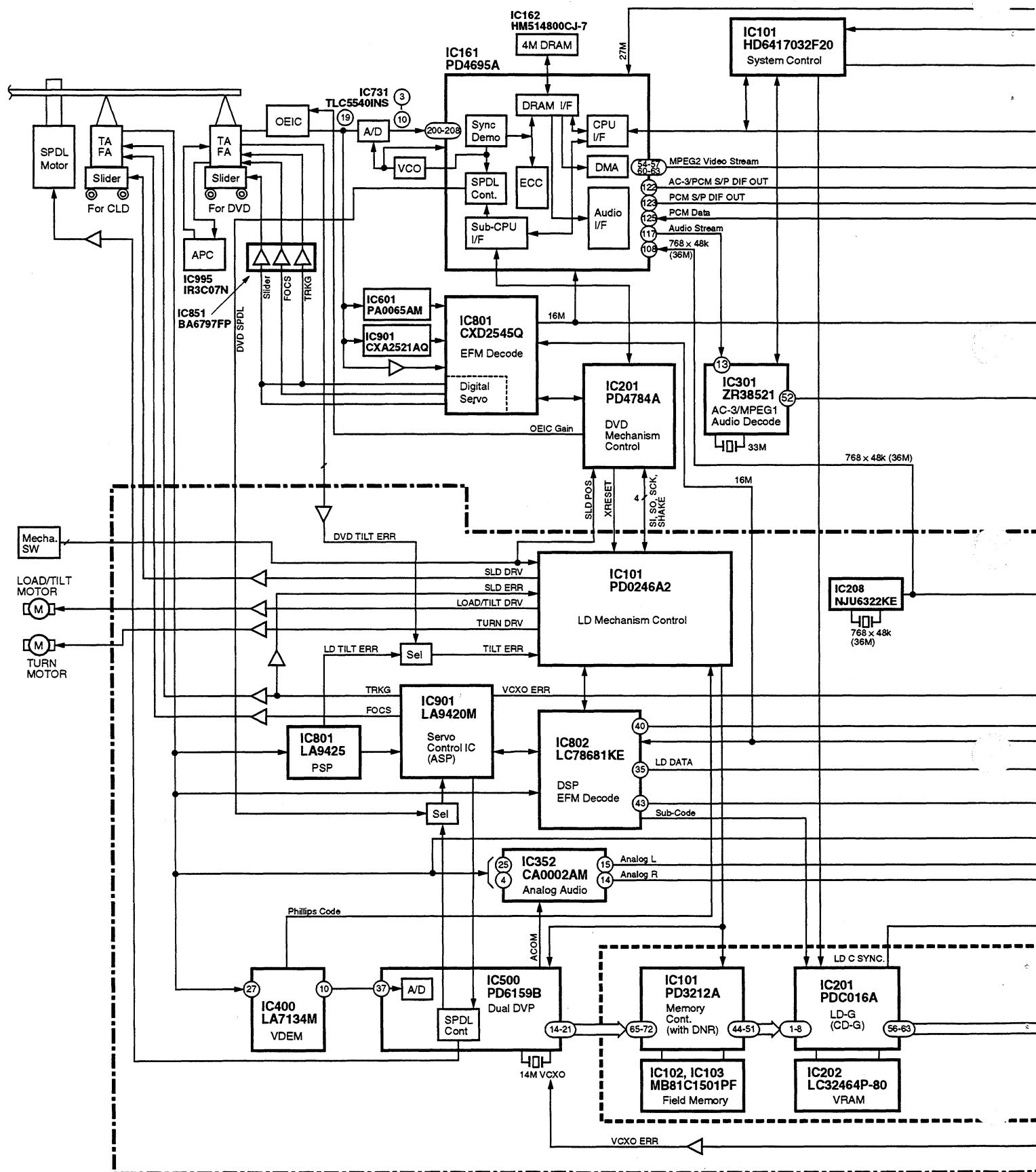


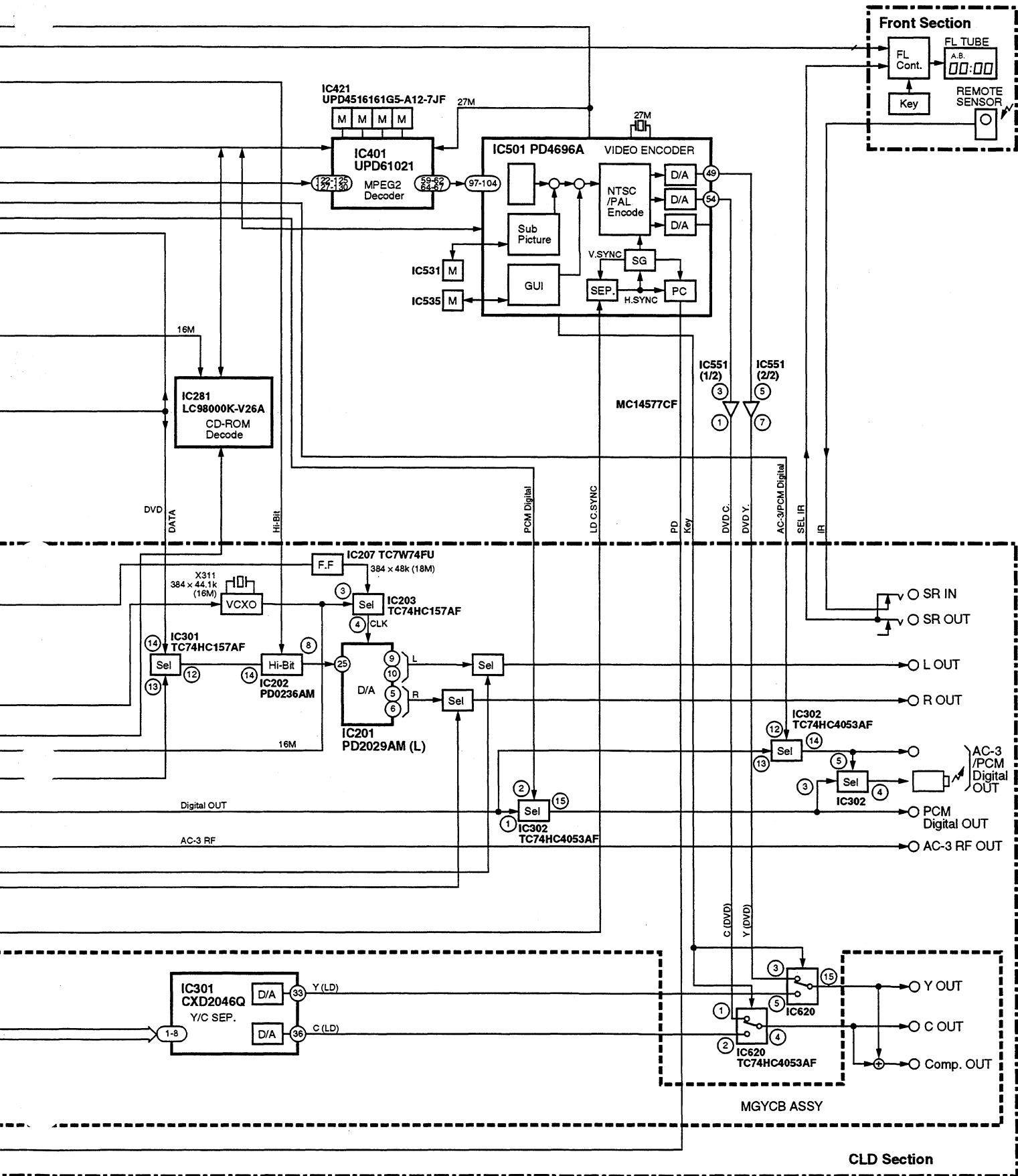
(2) THE FLEXIBLE CABLE
FOR DVD CARRIAGE ASSY



■: Part rating indication
side (部品定格表示側)

7.4 BLOCK DIAGRAM

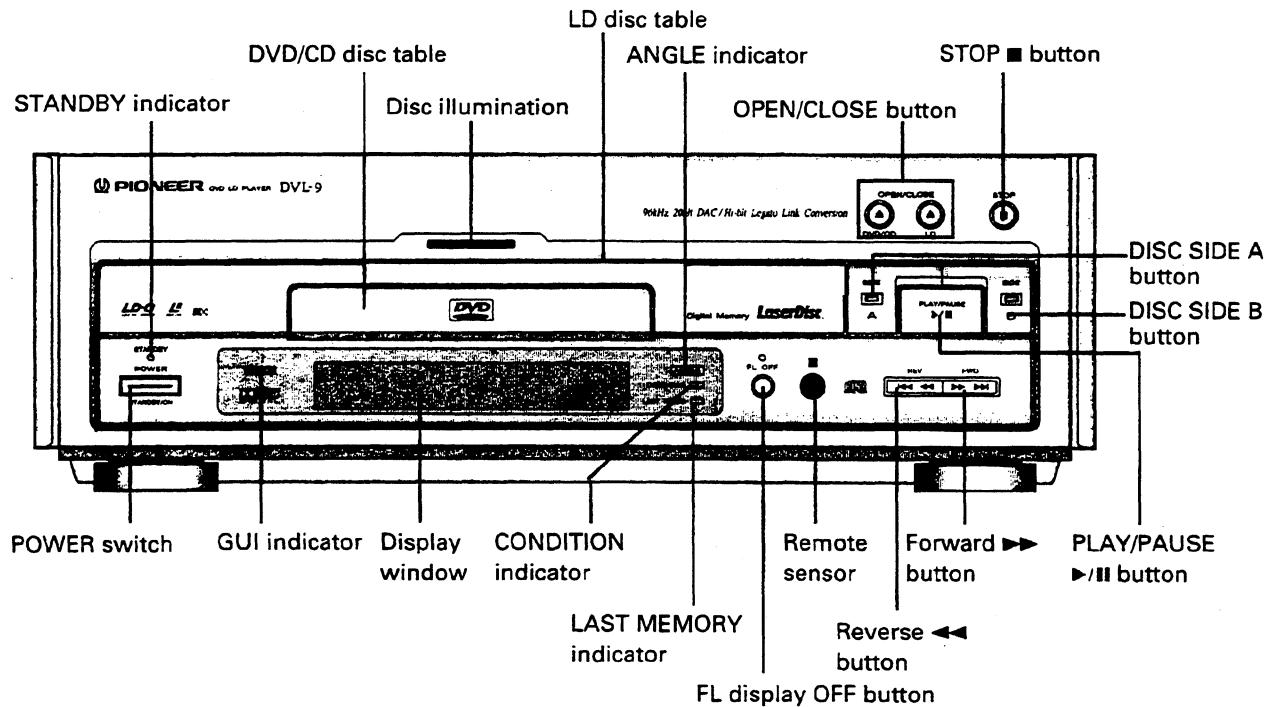




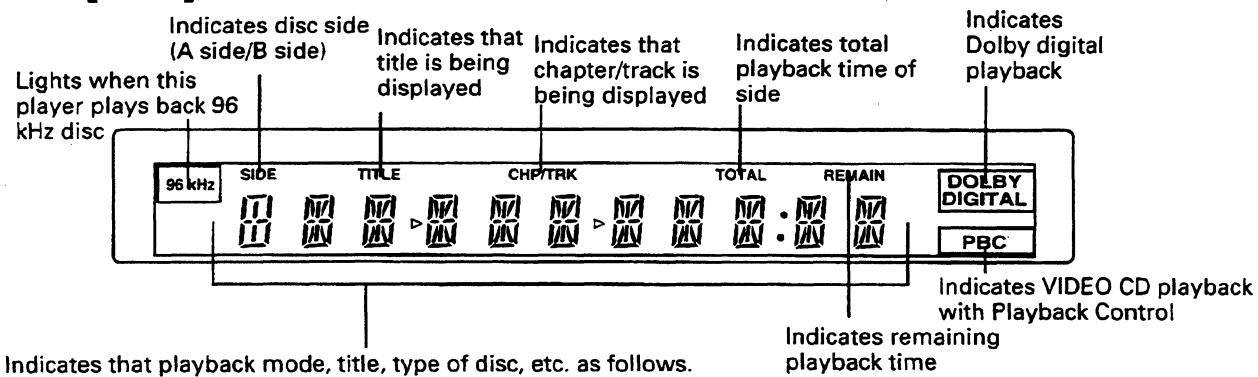
8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front panel



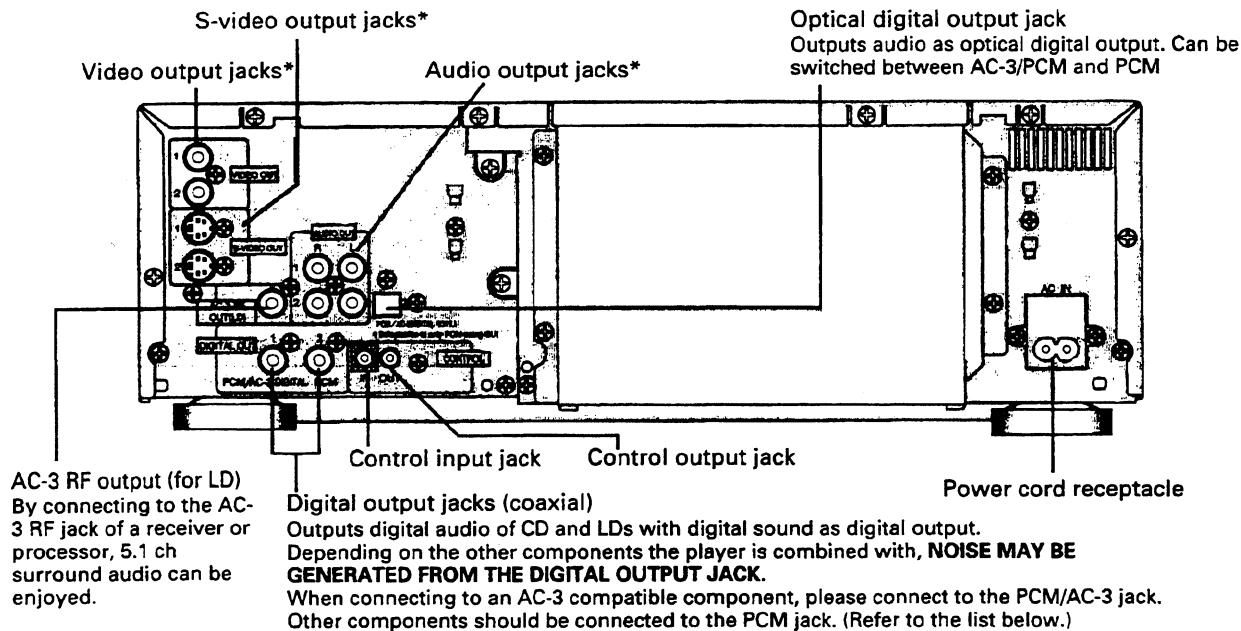
Display window



L	■	Laser Disc
C	■	Compact disc
C	■	CD video
D	■	DVD
V	■	VIDEO CD
O	■	Disc table is opening or is open

C	L	O	S	E	Disc table is closing
P	L	A	Y		Playback
S	T	O	P		Stop
P	A	U	S		Pause
N	O	D	I	S	No disc
-	O	F	F	-	Power is turned off
S	I	D	E	A(B)	SIDE A(B): Disc side

■ Rear panel

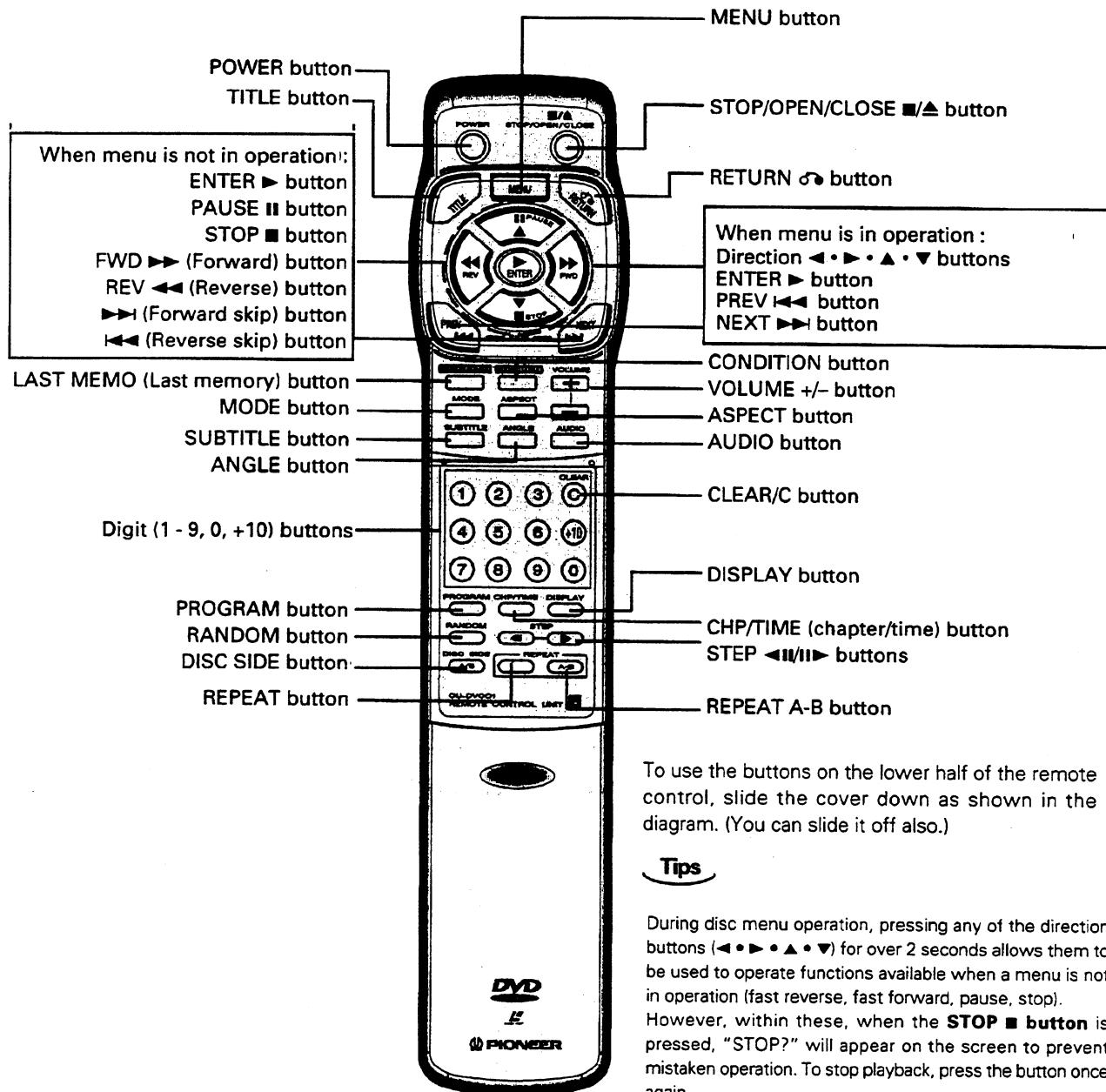


- * There are two jacks, allowing 2 systems to be connected at the same time. For example, one can be connected to the TV and the other can be connected to an AV amplifier.

Your home amplifier	Regular AV amplifier	Coaxial	Connect to PCM jack
		Optical	Connect to PCM/AC-3 DIGITAL (OPT) output jack and select PCM using the menu
	AC-3 compatible amplifier	Coaxial	Connect to PCM/AC-3 DIGITAL jack
		Optical	Connect to PCM/AC-3 DIGITAL (OPT) output jack and select AC-3/PCM using the menu

R D M	Random playback	S T E R E O	Stereo
P R O G R A M	Program mode	M E N U	Menu mode
R - T R R	Track/chapter repeat playback	T I T L E	Title menu
R - R	Start point of 2 point repeat playback	C H A P T E R	Chapter menu
R - R B	2-point repeat playback	S U B - T I T L E	Sub-title menu
R - T T L	Title repeat playback	S E T U P	Set-up menu
R - S I D	LD both-side repeat playback	A N G L E	Angle menu
C O N D M E M O R Y	Condition memory	R U D I O	Audio menu
L A S T M E M O R Y	Last memory playback	D O L B Y D I G I T A L S . I C H	Dolby digital surround 5.1 ch
C I N E M A 1	Cinema 1 mode	P C M 9 6 K	96K PCM audio
C I N E M A 2	Cinema 2 mode	P C M 4 8 K	48K PCM audio
A N I M A T I O N	Animation mode	M P E G A U D I O	MPEG1 or MPEG2 audio
S T A N D A R D	Standard mode		

■ Remote control



8.2 SPECIFICATIONS

General

System	DVD system, LaserVision Disc system, VIDEO CD system and Compact Disc digital audio system
Power requirements	AC 110-120/220-240 V, 50/60 Hz
Power consumption	65 W
Weight	9.1 kg
Dimensions	440 (W) x 463 (D) x 140 (H) mm (Not including protruding cables, etc.)
Operating temperature	+5°C to +35°C (+36°F to +96°F)
Operating humidity	5% to 85% (no condensation)

S-Video Outputs (2 pairs)

"1" is the S-VIDEO output and "2" is the S2-VIDEO output.
Y (luminance) - Output level 1 Vp-p (75 Ω)
C (color) - Output level 286 mVp-p (75 Ω)
Jacks S-VIDEO jacks

Video Outputs (2 pairs)

Output level	1 Vp-p (75Ω loaded, negative sync)
Jacks	RCA jacks

Audio Outputs (2 pairs)

Output level	
Analog audio output	200 mVrms (1 kHz, 40%)
Digital audio output	200 mVrms (1 kHz, -20 dB)
Number of channels	2
Jacks	RCA jacks

• Accessories

Audio cord (L = 1.5m) White	Remote control unit	Batteries....2
Red		
Video cord (L = 1.5m) Yellow		
Power cord		
<Flat blade 2-pin AC plug model>		
<Round blade 2-pin AC plug model>		
Use a power cord that matches your wall power socket. When the unit is used in Singapore, Malaysia or Indonesia, be sure to use a power cord with a 2-pin round-blade plug and do not use that with a 2-pin flat-blade plug.	● Warranty card ● Operating Instructions	